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 tncccccgct ggacntaaan aatgcaagat ggnattgnan acaaaancng gagctcctgn 840  
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 ctttggcatg gntgcctgnt gggttaatttg tataggcatn aactgcccta tctaaaaaaa 840  
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gaagactcaa aatcaagtca ctcacacaca agtaaaaaaac acaagaagaa aaccatcac 240

tgttctgaag agaaagaaga tgaggactac atgccaatca aaaatactaa tcaggatatc 300

tatagagaaa tgggggttgg tcactatgaa gaagaagaaa gctgttgga gaaacaaaag 360

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agtgaaaaga gagaccgaac tcagaaccga agtcgtagcc gatctcgaga gagggatggc 420  
cattatagta atagtcataa atcaaaatac caaacagatc tttatgaaag agaaaggagt 480  
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gaagtcttca ttttctctct ttttttatgg agtatttcta ctncaaaatc cttaacgttt 840  
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 catgagcgag agaggcacao agaaaagaaa aagaagaaga agaagaagtc cgagaaggag 420  
 aagcatctgg acgatgagga aagaaggaag cgaaaggaag agaagaagcg gaagcgagag 480  
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tanaacctcc catggatttt ggcacccatga nagaacnaaat tgtagctaata gaatncaagt 780
cagntacgga atttanggca attccacgct gatgtgtgat atgcatggac ttncataggc 840
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cctgctgttc gtgtgctact acctgtccta ctacctgtgc tccgggtcct catattttgt 360
gcttgcaaata ggacatatcc tgccaacag tgaaaatgct catggccaat ctctggaaga 420
agattccgca ttggaagctt tgctgaattt tttctttcca acaacttgca atctgaggga 480
aaatcagggtg gcaaagcctt gtaatgagct gcaagatctt agtgagagtg aatgtttgag 540
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 aattgaaaga acacaacaaa ggatgaaaga aatggagagt gttatgaaag agcaagaaca 180  
 gtacattgcc actcagtaca aggnnggcat agatttgggg caagaattga ggctgacccg 240  
 ggagcaggtg cagaactctc atacagaatt ggcagaggct cgtcatcagc aagtccaagc 300  
 acagagagaa atagaaaggc tctctagtga actggaggat atgaagcaac tctctaaaga 360  
 gaaagatgct catggaaacc atttagctga agaactgggg gcttctaaag tacgtgaagc 420

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ttctgctgac tctcaaaagt cttctgttca gcaactaaac gaacagttag agaaggcaaa    600
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agtattaaag catatctatg aaaacaaaac cncncnnnnc ngccntcccn ccnnnannnc    780
ntctcgagag tacttctaaa gnggccgcgg gncctccga tttccccng ggnggggtac    840
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ttctagcagt gccagaaga aggataaaag agttcaaggt ggaagagtga ttgagtcccc    180
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gagcccggat ttatctgaag caatggaaat gatggagtct cagacactac tgctgacgct    540
actatccgta aagatggaga acaatcttgc tgagtttgaa agaagggcag aaaagaattt    600
attaataatg tgtaaggaga aggagaagct acagaaaaag gcccacgagc tgaagcgcag    660

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gcttctcctc tctcagagga agcgggagct ggcagatgtc ctggatgcc agatcgagat      720
gctcagcccc cttcgaggca gtggncacac gcttcaagga gcaatacagg acattcgcca      780
cggnccttgg acactaccag gcacgagctg cccgtgaggt ccatccacct ggagggagat      840
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cttgatgttg gtgatcg                                                    917

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 <223> n = a, c, g or t/u

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<212> DNA
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&lt;211&gt; 3496

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&lt;213&gt; homo sapiens

&lt;400&gt; 18

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&lt;211&gt; 1807

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 19

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-50-

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ggctctgttca	gcctaccttg	gtctccatga	caatgaccgt	cgcctggcag	accacttcgg	720
tggaagtta	cacttggggg	tcattcagat	ccgagagaag	cttgatcagt	tgaggaaaac	780
tgctcgtgaa	aagcaggaga	agagaaatca	ggatcgcttg	aggaggagag	aggagagggg	840
acgggaggag	cgtctgagca	ggaggtcggg	atcaagaacc	agagatcgca	ggaggtcacg	900
ctcccgggat	cggcgtcgga	ggcgggtcaag	atctacctcc	cgagagcgac	ggaaattgtc	960
ccggtcccgg	tcccagata	gacatcggcg	ccaccgcagc	cgttcccgga	gccacagccg	1020
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tcggtagctg	caaccaggag	tgagcccttc	tctgtgttcc	caggggtctgc	tgagggccgt	1140
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actcaggtgt	gggaagaggc	gagagggctg	tggaggagct	cgcacggcgc	caggtgatgg	1260
gctgcacagg	cactgtcccc	tgctgcgtc	ctggggcctg	tgactgttg	cgtccatgct	1320
cagagtggct	gagacttgtg	tcctgaccag	gccctgctta	cctctgtttt	ggtttttgtt	1380

-72-

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 <213> homo sapiens

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 caaggaatca ctgaagatcg gcgagggagg acaggggggt catcatgggt ggctttttct 120  
 caagtatatt ttccagtctg tttggaactc gggaaatgag aattttaatt ttgggattag 180  
 atggagcagg aaaaaccaca attttgtaca gattacaagt gggagaagtt gttactacta 240  
 tacctaccat tggatttaat gtagagacgg tgacgtacaa aaaccttaaa ttccaagtct 300  
 gggatttagg aggacagaca agtatcaggc catactggag atgttactat tcaaacacag 360  
 atgcagtcac ttatgtagta gacagttgtg accgagaccg aattggcatt tccaaatcag 420  
 agttagttgc catgttggag gaagaagagc tgagaaaagc catttttagtg gtgtttgcaa 480  
 ataaacagga catggaacag gccatgactt cctcagagat ggcaaattca ctggggttac 540  
 ctgccttgaa ggaccgaaaa tggcagatat tcaaacgctc agcaaccaa ggcaccggcc 600  
 ttgatgaggc aatggaatgg ttagttgaaa cattaaaaag cagacagtaa ttcagtccat 660  
 tcttctcccc tgaaatgaag actacatcac ctctctccct ttggaaacag tcaagtgtac 720  
 ttcacactac tagatgttaa aactatatga ttattggcat atactgactg actgcaatat 780  
 ttgtagtaaa tagggaaaat aagtatttag ttggagggat aatttgatcg aatcacctga 840  
 atgttctatg taatgtaaaa tattcttttc ttgctttctt gtgttaaggt atatattcta 900  
 tttgtatgga attcttattc aaatacagtt gtattaaaga gtatactcct attggatgaa 960  
 aaaaacct 968

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 atcagcttga agaactatga tccccagaag gacaagcgtc tctcgggcac cgtcaggctt 180  
 aagtcactc cccgccctaa gttctctgtg tgtgtcctgg gggaccagca gcaactgtgac 240

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gaggctaagg ccgtggatat cccccacatg gacatcgagg cgctgaaaaa actcaacaag 300  
 aataaaaaaac tgggtcaagaa gctggccaag aagtatgatg cgtttttggc ctcagagtct 360  
 ctgatcaagc agattccacg aatcctcggc ccagggtttaa ataaggcagg aaagtccctt 420  
 tccctgctca cacacaacga aaacatgggtg gccaaagtgg atgaggtgaa gtccacaatc 480  
 aagttccaaa tgaagaaggt gttatgtctg gctgtagctg ttggtcacgt gaagatgaca 540  
 gacgatgagc ttgtgtataa cattcacctg gctgtcaact tcttggtgtc attgctcaag 600  
 aaaaactggc agaatgtccg ggccttatat atcaagagca ccatgggcaa gcccagcgc 660  
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<210> 46  
 <211> 145  
 <212> PRT  
 <213> homo sapiens

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

<220>  
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 <222> (136)..(136)  
 <223> Xaa = any amino acid

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&lt;400&gt; 46

Arg Arg Lys Trp Ser Leu Asp Arg Leu Arg Asp Thr Val Lys Ala Leu  
 1 5 10 15  
 Thr Arg Glu Gln Glu Lys Leu Leu Gly Gln Leu Lys Glu Val Gln Ala  
 20 25 30  
 Asp Lys Glu Gln Ser Glu Ala Glu Leu Gln Val Ala Gln Gln Glu Asn  
 35 40 45  
 His His Leu Asn Leu Asp Leu Lys Glu Ala Lys Ser Trp Gln Glu Glu  
 50 55 60  
 Xaa Ser Ala Gln Ala Gln Arg Leu Lys Asp Lys Val Ala Gln Met Lys  
 65 70 75 80  
 Asp Thr Leu Cys Gln Ala Gln Gln Arg Val Ala Gln Leu Glu Pro Leu  
 85 90 95  
 Lys Glu Gln Leu Xaa Gly Ala Gln Xaa Ala Leu Xaa Ala Ser Ser Gln  
 100 105 110  
 Xaa Lys Ala Thr Leu Ser Trp Gly Gly Val Cys Gln Xaa Xaa Xaa Xaa  
 115 120 125  
 Pro Gly Thr Xaa Pro Tyr Ala Xaa Leu His Arg Ser Arg Pro Gly Ser  
 130 135 140

Gly  
145

<210> 47  
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 <223> Xaa = any amino acid

&lt;400&gt; 47

Gly Arg Ala Pro Val Xaa Gln Cys Ser Asp Gly Glu Gly Arg Lys Arg  
 1 5 10 15  
 Thr Ser Ser Thr Cys Ser Asn Glu Ser Leu Ser Val Gly Gly Thr Ser  
 20 25 30  
 Val Thr Pro Arg Arg Ile Ser Trp Arg Gln Arg Ile Phe Leu Arg Val  
 35 40 45  
 Ala Ser Pro Met Asn Lys Ser Pro Ser Ala Met Gln Gln Gln Asp Gly  
 50 55 60  
 Leu Asp Arg Asn Glu Leu Leu Pro Leu Ser Pro Leu Ser Pro Thr Met  
 65 70 75 80

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Glu Glu Glu Pro Leu Val Val Phe Leu Ser Gly Glu Asp Asp Pro Glu  
85 90 95

Lys Ile Glu Glu Arg Lys Lys Ser Lys Glu Leu Arg Ser Leu Trp Arg  
100 105 110

Lys Ala Ile His Gln Gln Ile Leu Leu Leu Arg Met Glu Lys Glu Asn  
115 120 125

Gln Lys Leu Glu Ala Ser Arg Asp Glu Leu Gln Ser Arg Lys Val Lys  
130 135 140

Leu Asp Tyr Glu Glu Val Gly Ala Cys Gln Lys Glu Val Leu Ile Thr  
145 150 155 160

Trp Asp Lys Lys Leu Leu Asn Cys Arg Ala Lys Ile Arg Cys Asp Met  
165 170 175

Glu Asp Ile His Thr Leu Leu Lys Lys Glu Phe Pro Lys Ser Thr Arg  
180 185 190

Arg Ile Trp Gln Phe Leu Ala Tyr Ser Thr Asp Ser Thr Gln Ile Ala  
195 200 205

<210> 48  
<211> 256  
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<213> hom sapiens

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<223> Xaa = any amino acid

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<223> Xaa = any amino acid

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<223> Xaa = any amino acid

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<223> Xaa = any amino acid

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&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (254)..(254)

&lt;223&gt; Xaa = any amino acid

&lt;400&gt; 48

Met Leu Arg Ser Pro Phe Asp Arg Asn Val Pro Val Asn Leu Glu Leu  
1 5 10 15

Gln Glu Leu Leu Leu Asp Tyr Ser Phe Gln His Leu Gly Val Ser Ser  
20 25 30

Gln Gly Cys Val Asp His Pro Ile Val Leu Thr Glu Ala Val Cys Asn  
35 40 45

Pro Leu Tyr Ser Arg Gln Met Met Ser Glu Leu Leu Phe Glu Cys Tyr  
50 55 60

Gly Ile Pro Lys Val Ala Tyr Gly Ile Asp Ser Leu Phe Ser Phe Tyr  
65 70 75 80

His Asn Lys Pro Lys Asn Ser Met Cys Ser Gly Leu Ile Ile Ser Ser  
85 90 95

Gly Tyr Gln Cys Thr His Val Leu Pro Ile Leu Glu Gly Arg Leu Asp  
100 105 110

Ala Lys Asn Cys Lys Arg Ile Asn Leu Gly Gly Ser Gln Ala Ala Gly  
115 120 125

Tyr Leu Gln Arg Leu Leu Gln Leu Lys Tyr Pro Gly His Leu Ala Ala  
130 135 140

Ile Thr Leu Ser Arg Met Glu Glu Ile Leu His Glu His Ser Tyr Ile  
145 150 155 160

Ala Glu Asp Tyr Val Glu Glu Leu His Lys Trp Arg Cys Pro Asp Tyr  
165 170 175

Tyr Glu Asn Asn Val His Lys Met Gln Xaa Pro Phe Ser Ser Lys Leu  
180 185 190

Leu Gly Ser Thr Leu Thr Ser Glu Glu Lys Gln Glu Arg Arg Gln Gln  
195 200 205

Gln Leu Arg Arg Leu Gln Glu Leu Asn Ala Xaa Arg Arg Xaa Glu Lys  
210 215 220

Leu Gln Leu Gly Ser Xaa Ala Ser Gly Pro Thr Ala Ile Cys Ala Gly  
225 230 235 240

Thr Ser Xaa Gly Trp Pro Xaa Gly Ser Val Tyr Lys Ala Xaa Met Ser  
245 250 255

&lt;210&gt; 49

&lt;211&gt; 205

&lt;212&gt; PRT

&lt;213&gt; homosapiens

&lt;220&gt;



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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

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 <223> Xaa = any amino acid

<400> 49

Met Asn Asp Ile Ser Gln Lys Ala Glu Ile Leu Leu Ser Ser Ser Lys  
 1 5 10 15

Pro Val Pro Lys Thr Tyr Val Pro Lys Leu Gly Lys Gly Asp Val Lys  
 20 25 30

Asp Lys Phe Glu Ala Met Gln Arg Ala Arg Glu Glu Arg Asn Gln Arg  
 35 40 45

Arg Ser Arg Asp Glu Lys Gln Arg Arg Lys Glu Gln Tyr Ile Arg Glu  
 50 55 60

Arg Glu Trp Asn Arg Arg Lys Gln Glu Ile Lys Glu Met Leu Ala Ser  
 65 70 75 80

Asp Asp Glu Glu Asp Val Ser Ser Lys Val Glu Lys Ala Tyr Val Pro  
 85 90 95

Lys Leu Thr Gly Thr Val Lys Gly Arg Phe Ala Glu Met Glu Lys Gln  
 100 105 110

Arg Gln Glu Glu Gln Arg Lys Arg Thr Glu Glu Glu Arg Lys Arg Arg  
 115 120 125

Ile Glu Gln Asp Met Leu Glu Lys Arg Lys Ile Gln Arg Glu Leu Xaa  
 130 135 140

Lys Arg Ala Glu Gln Glu Gly Asp Asp Ser Leu Leu Xaa Thr Xaa Val  
 145 150 155 160

Arg Lys Arg Arg Glu Glu Lys Lys Asp Pro Val Xaa Glu Ile Lys Ile  
180 185 190

Arg Xaa Glu Thr Xaa Pro Leu Ser Gly Ala Arg Ala Ser  
195 200 205

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<210> 50
<211> 172
<212> PRT
<213> homosapiens
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<220>
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<223>     Xaa = any amino acid

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<223> Xaa = any amino acid
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<220>
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<222> (151)..(151)
<223> Xaa = any amino acid
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<400> 50

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Gln Val Leu Pro Asp Ser Cys Leu Leu Val Trp Asn Met Ala Met Pro  
20 25 30

Leu Gly Glu Arg Ile Thr Gly Gly Phe Leu Leu Pro Glu Leu Gln Pro  
35 40 45

Leu Ala Gly Ser Leu Arg Arg Asp Val Val Glu Gly Asn Phe Tyr Ser  
50 55 60

Ala Thr Leu Ala Gly Asp His Cys Phe Asp Val Leu Asp Leu His Phe  
65 70 75 80

His Phe Arg His Ala Val Gln His Arg His Arg Asp Gly Val His Trp  
85 90 95

Asp Gln His Ala His Arg His Leu Ser His Leu Leu Leu Thr His Val  
100 105 110

Ala Asp Ala Trp Gly Val Glu Leu Pro Lys Arg Gly Tyr Pro Pro Asp  
115 120 125

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Pro Trp Ile Glu Asp Trp Ala Xaa Met Asn His Pro Phe Xaa Gly Ser  
 130 135 140

His Xaa Gln Thr Gln Thr Xaa Gly Arg Pro Gly Pro Cys Ser Thr Pro  
 145 150 155 160

Leu Leu Leu Ala Leu His Ala Phe Ser Tyr Arg Phe  
 165 170

<210> 51  
 <211> 159  
 <212> PRT  
 <213> homosapiens

<220>  
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 <223> Xaa = any amino acid

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 <222> (153)..(153)  
 <223> Xaa = any amino acid

<400> 51

Met Leu Gln Gln Glu Thr Ile Arg Asn Gly Glu Leu Glu Asp Thr Gln  
 1 5 10 15

Thr Lys Leu Glu Lys Gln Val Ser Lys Leu Glu Gln Glu Leu Gln Lys  
 20 25 30

Gln Arg Glu Ser Ser Ala Glu Lys Leu Arg Lys Met Glu Glu Lys Cys  
 35 40 45

Glu Ser Ala Ala His Glu Ala Asp Leu Lys Arg Gln Lys Val Ile Glu  
 50 55 60

Leu Thr Gly Thr Ala Arg Gln Val Lys Ile Glu Met Asp Gln Tyr Lys  
 65 70 75 80

Glu Glu Leu Ser Lys Met Glu Lys Glu Ile Met His Leu Lys Arg Asp  
 85 90 95

Gly Glu Asn Lys Ala Met His Leu Ser Gln Leu Asp Met Ile Leu Asp  
 100 105 110

Gln Thr Lys Thr Glu Leu Glu Lys Lys Thr Asn Ala Val Lys Glu Leu  
 115 120 125

Glu Lys Leu Gln His Ser Thr Glu Thr Glu Leu Thr Glu Ala Xaa Gln  
 130 135 140

Asn Gly Lys Tyr Leu Arg Leu Thr Xaa Lys Cys Ser Trp Glu Ile  
 145 150 155

<210> 52  
 <211> 122  
 <212> PRT

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&lt;213&gt; homosapiens

&lt;400&gt; 52

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Met Ile Gly Gly Thr Glu Met Thr Lys Glu Ile Pro Arg Lys Arg Lys
1           5           10           15
Asn Thr Val Glu Ala Glu Ala Glu Lys Gly Asn Thr Glu Val Gly Val
          20           25           30
Glu Val Glu Met Gln Gly Asn Glu Val Glu Val Glu Ala Lys Arg Asn
          35           40           45
Gln Val Asn Ile Lys Met Lys Val Lys Lys Asn Gln Ile Asn Glu Val
          50           55           60
Glu Val Ala Val Lys Glu Glu Leu Thr Val Leu Lys Asn Gln Lys Asn
65           70           75           80
Gly Asn Ile Val Pro Ala Lys Lys Asn Leu Glu Ser Val Val Glu Ala
          85           90           95
Lys Asn Val Pro Thr Asn Glu Ile Thr Val Ile Val Arg Thr Ser Gln
          100          105          110
Thr Asn Met Ile Val Glu Gly Ala Lys Val
          115          120

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&lt;210&gt; 53

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; homosapiens

&lt;400&gt; 53

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Met Ser Arg Pro Lys Thr Gln Asn Gln Val Thr His Thr Gln Val Lys
1           5           10           15
Asn Thr Arg Arg Lys Pro Ile Thr Val Leu Lys Arg Lys Lys Met Arg
          20           25           30
Thr Thr Cys Gln Ser Lys Ile Leu Ile Arg Ile Ser Ile Glu Lys Trp
          35           40           45
Gly Leu Val Thr Met Lys Lys Lys Lys Ala Val Gly Arg Asn Lys Arg
          50           55           60
Val Lys Arg Glu Thr Glu Leu Arg Thr Glu Val Val Ala Asp Leu Glu
65           70           75           80
Arg Gly Met Ala Ile Ile Val Ile Val Ile Asn Gln Asn Thr Lys Gln
          85           90           95
Ile Phe Met Lys Glu Lys Gly Val Lys Arg Glu Thr Glu Ala Glu Val
          100          105          110
Gln Arg Ser Pro Lys Ile Lys Lys Asn Leu Ser Ile Asp Glu Arg
          115          120          125

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&lt;210&gt; 54

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<211> 175
<212> PRT
<213> homosapiens
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<223> Xaa = any amino acid
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<220>
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<223> Xaa = any amino acid
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Glu	Asp	Tyr	Ala 20	Asp	Lys	Pro	Leu	Glu 25	Lys	Pro	Leu	Lys	Leu 30	Val	Leu
Lys	Val	Gly 35	Gly	Ser	Glu	Val	Thr 40	Glu	Leu	Ser	Gly	Ser 45	Gly	His	Asp
Ser	Ser 50	Tyr	Tyr	Asp	Asp	Arg 55	Ser	Asp	His	Glu	Arg 60	Glu	Arg	His	Lys
Glu 65	Lys	Lys	Lys	Lys	Lys 70	Lys	Lys	Lys	Ser	Glu 75	Lys	Glu	Lys	His	Leu 80
Asp	Asp	Glu	Glu 85	Arg	Arg	Lys	Arg	Lys 90	Glu	Glu	Lys	Lys	Arg	Lys 95	Arg
Glu	Arg	Glu	His 100	Cys	Asp	Thr	Glu	Gly 105	Glu	Ala	Asp	Asp	Phe 110	Asp	Pro
Gly	Lys	Lys 115	Val	Glu	Val	Glu	Pro 120	Pro	Pro	Asp	Arg	Pro 125	Val	Arg	Ala
Cys	Arg 130	Thr	Xaa	Pro	Ala	Glu 135	Asn	Glu	Ser	Thr	Pro 140	Ile	Gln	Gln	Leu
Leu 145	Xaa	Thr	Leu	Pro	Pro 150	Pro	Ala	Ser	Glu	Lys 155	Arg	Ser	Pro	Trp	Ile 160
Phe	Cys	Phe	Ser 165	Cys	His	Gly	Cys	Asn 170	Cys	Ser	Trp	Asp	Ile 175	Pro	

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<210> 55
<211> 255
<212> PRT
<213> Homo sapiens
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Met Ser Ser His Arg Arg Lys Ala Lys Gly Arg Asn Arg Arg Ser His  
1 5 10 15  
Arg Ala Met Arg Val Ala His Leu Glu Leu Ala Thr Tyr Glu Leu Ala

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20					25					30					
Ala	Thr	Glu	Ser	Asn	Pro	Glu	Ser	Ser	His	Pro	Gly	Tyr	Glu	Ala	Ala
		35					40					45			
Met	Ala	Asp	Arg	Pro	Gln	Pro	Gly	Trp	Arg	Glu	Ser	Leu	Lys	Met	Arg
	50					55					60				
Val	Ser	Lys	Pro	Phe	Gly	Met	Leu	Met	Leu	Ser	Ile	Trp	Ile	Leu	Leu
	65					70					75				80
Phe	Val	Cys	Tyr	Tyr	Leu	Ser	Tyr	Tyr	Leu	Cys	Ser	Gly	Ser	Ser	Tyr
			85						90					95	
Phe	Val	Leu	Ala	Asn	Gly	His	Ile	Leu	Pro	Asn	Ser	Glu	Asn	Ala	His
			100					105					110		
Gly	Gln	Ser	Leu	Glu	Glu	Asp	Ser	Ala	Leu	Glu	Ala	Leu	Leu	Asn	Phe
		115					120					125			
Phe	Phe	Pro	Thr	Thr	Cys	Asn	Leu	Arg	Glu	Asn	Gln	Val	Ala	Lys	Pro
	130					135					140				
Cys	Asn	Glu	Leu	Gln	Asp	Leu	Ser	Glu	Ser	Glu	Cys	Leu	Arg	His	Lys
	145					150					155				160
Cys	Cys	Phe	Ser	Ser	Ser	Gly	Thr	Thr	Ser	Phe	Lys	Cys	Phe	Ala	Pro
			165						170					175	
Phe	Arg	Asp	Val	Pro	Lys	Gln	Met	Met	Gln	Met	Phe	Gly	Leu	Gly	Ala
			180					185					190		
Ile	Ser	Leu	Ile	Leu	Val	Cys	Leu	Pro	Ile	Tyr	Cys	Arg	Ser	Leu	Phe
	195						200					205			
Trp	Arg	Ser	Glu	Pro	Ala	Asp	Asp	Leu	Gln	Arg	Gln	Asp	Asn	Arg	Val
	210					215					220				
Val	Thr	Gly	Leu	Lys	Lys	Gln	Arg	Arg	Lys	Arg	Lys	Arg	Lys	Ser	Glu
	225					230					235				240
Met	Leu	Gln	Lys	Ala	Ala	Arg	Gly	Arg	Glu	Glu	His	Gly	Asp	Glu	
			245						250					255	

&lt;210&gt; . 56

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; homosapiens

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (42)..(42)

&lt;223&gt; Xaa = any amino acid

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (225)..(229)

&lt;223&gt; Xaa = any amino acid

&lt;220&gt;

-83-

<221> MISC\_FEATURE  
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 <223> Xaa = any amino acid

<400> 56

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Met Leu Gln Asn Glu Gln Glu Ile Ser Gln Leu Lys Lys Glu Ile Glu
1          5          10          15

Arg Thr Gln Gln Arg Met Lys Glu Met Glu Ser Val Met Lys Glu Gln
          20          25          30

Glu Gln Tyr Ile Ala Thr Gln Tyr Lys Xaa Ala Ile Asp Leu Gly Gln
          35          40          45

Glu Leu Arg Leu Thr Arg Glu Gln Val Gln Asn Ser His Thr Glu Leu
          50          55          60

Ala Glu Ala Arg His Gln Gln Val Gln Ala Gln Arg Glu Ile Glu Arg
65          70          75          80

Leu Ser Ser Glu Leu Glu Asp Met Lys Gln Leu Ser Lys Glu Lys Asp
          85          90          95

Ala His Gly Asn His Leu Ala Glu Glu Leu Gly Ala Ser Lys Val Arg
          100          105          110

Glu Ala His Leu Glu Ala Arg Met Gln Ala Glu Ile Lys Lys Leu Ser
          115          120          125

Ala Glu Val Glu Ser Leu Lys Glu Ala Tyr His Met Glu Met Ile Ser
          130          135          140

His Gln Glu Asn His Ala Lys Trp Lys Ile Ser Ala Asp Ser Gln Lys
145          150          155          160

Ser Ser Val Gln Gln Leu Asn Glu Gln Leu Glu Lys Ala Lys Leu Glu
          165          170          175

Leu Glu Glu Ala Gln Asp Thr Val Ser Asn Leu His Gln Gln Val Gln
          180          185          190

Asp Arg Asn Glu Val Ile Glu Ala Ala Asn Glu Ala Leu Leu Thr Lys
          195          200          205

Val Ser Lys His Ile Lys Val Leu Lys His Ile Tyr Glu Asn Lys Thr
          210          215          220

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Xaa Ser Arg Glu Tyr Phe
225          230          235

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<210> 57  
 <211> 249  
 <212> PRT  
 <213> homosapiens

<220>  
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 <223> Xaa = any amino acid

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&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (239)..(239)

&lt;223&gt; Xaa = any amino acid

&lt;400&gt; 57

Met Ala Asp Ser Ser Gly Arg Gly Ala Gly Lys Pro Ala Thr Gly Pro  
 1 5 10 15

Thr Asn Ser Ser Ser Ala Lys Lys Lys Asp Lys Arg Val Gln Gly Gly  
 20 25 30

Arg Val Ile Glu Ser Arg Tyr Leu Gln Tyr Glu Lys Lys Thr Thr Gln  
 35 40 45

Lys Ala Pro Ala Gly Asp Gly Ser Gln Thr Arg Gly Lys Met Ser Glu  
 50 55 60

Gly Gly Arg Lys Ser Ser Leu Leu Gln Lys Ser Lys Ala Asp Ser Ser  
 65 70 75 80

Gly Val Gly Lys Gly Asp Leu Gln Ser Thr Leu Leu Glu Gly His Gly  
 85 90 95

Thr Ala Pro Pro Asp Leu Asp Leu Ser Ala Ile Asn Asp Lys Ser Ile  
 100 105 110

Val Lys Lys Thr Pro Gln Leu Ala Lys Thr Ile Ser Lys Lys Pro Glu  
 115 120 125

Ser Thr Ser Phe Ser Ala Pro Arg Lys Lys Ser Pro Asp Leu Ser Glu  
 130 135 140

Ala Met Glu Met Met Glu Ser Gln Thr Leu Leu Leu Thr Leu Leu Ser  
 145 150 155 160

Val Lys Met Glu Asn Asn Leu Ala Glu Phe Glu Arg Arg Ala Glu Lys  
 165 170 175

Asn Leu Leu Ile Met Cys Lys Glu Lys Glu Lys Leu Gln Lys Lys Ala  
 180 185 190

His Glu Leu Lys Arg Arg Leu Leu Leu Ser Gln Arg Lys Arg Glu Leu  
 195 200 205

Ala Asp Val Leu Asp Ala Gln Ile Glu Met Leu Ser Pro Leu Arg Gly  
 210 215 220

Ser Xaa His Thr Leu Gln Gly Ala Ile Gln Asp Ile Arg His Xaa Pro  
 225 230 235 240

Trp Thr Leu Pro Gly Thr Ser Cys Pro  
 245

&lt;210&gt; 58

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; homosapiens



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&lt;400&gt; 58

Met Asp Tyr Arg Arg Leu Leu Met Ser Arg Val Val Pro Gly Gln Phe  
 1 5 10 15  
 Asp Asp Ala Asp Ser Ser Asp Ser Glu Asn Arg Asp Leu Lys Thr Val  
 20 25 30  
 Lys Glu Lys Asp Asp Ile Leu Phe Glu Asp Leu Gln Asp Asn Val Asn  
 35 40 45  
 Glu Asn Gly Glu Gly Glu Ile Glu Asp Glu Glu Glu Glu Gly Tyr Asp  
 50 55 60  
 Asp Asp Asp Asp Asp Trp Asp Trp Asp Glu Gly Val Gly Lys Leu Ala  
 65 70 75 80  
 Lys Gly Tyr Val Trp Asn Gly Gly Ser Asn Pro Gln Ala Asn Arg Gln  
 85 90 95  
 Thr Ser Asp Ser Ser Ser Ala Lys Met Ser Thr Pro Ala Asp Lys Val  
 100 105 110  
 Leu Arg Lys Ile  
 115

&lt;210&gt; 59

&lt;211&gt; 225

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 59

Met Ala His Ala Ala Gln Val Gly Leu Gln Asp Ala Thr Ser Pro Ile  
 1 5 10 15  
 Met Glu Glu Leu Ile Thr Phe His Asp His Ala Leu Met Ile Ile Phe  
 20 25 30  
 Leu Ile Cys Phe Leu Val Leu Tyr Ala Leu Phe Leu Thr Leu Thr Thr  
 35 40 45  
 Lys Leu Thr Asn Thr Asn Ile Ser Asp Ala Gln Glu Met Val Trp Thr  
 50 55 60  
 Ile Leu Pro Ala Ile Ile Leu Val Leu Ile Ala Leu Pro Ser Leu Arg  
 65 70 75 80  
 Ile Leu Tyr Met Thr Asp Glu Val Asn Asp Pro Ser Leu Thr Ile Lys  
 85 90 95  
 Ser Ile Gly His Gln Trp Tyr Trp Thr Tyr Glu Tyr Thr Asp Tyr Gly  
 100 105 110  
 Gly Leu Ile Phe Asn Ser Tyr Met Leu Pro Pro Leu Phe Leu Glu Pro  
 115 120 125  
 Gly Asp Leu Arg Leu Leu Asp Val Asp Asn Arg Val Val Leu Pro Ile  
 130 135 140

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Glu Ala Pro Ile Arg Met Met Ile Thr Ser Gln Asp Val Leu His Ser  
 145 150 155 160  
 Trp Ala Val Pro Thr Leu Gly Leu Lys Thr Asp Ala Ile Pro Gly Arg  
 165 170 175  
 Leu Asn Gln Thr Thr Phe Thr Ala Thr Arg Pro Gly Val Tyr Tyr Gly  
 180 185 190  
 Gln Cys Ser Glu Ile Cys Gly Ala Asn His Ser Phe Met Pro Ile Val  
 195 200 205  
 Leu Glu Leu Ile Pro Leu Lys Ile Phe Glu Met Gly Pro Val Phe Thr  
 210 215 220  
 Leu  
 225  
 <210> 60  
 <211> 384  
 <212> PRT  
 <213> homo sapiens  
 <400> 60  
 Met Asp Ala Val Met Thr Arg Lys Lys Ile Met Lys Gln Lys Glu Met  
 1 5 10 15  
 Val Trp Asn Asn Asn Lys Lys Leu Ser Asp Leu Glu Glu Val Ala Lys  
 20 25 30  
 Glu Arg Ala Gln Asn Leu Leu Gln Arg Ala Asn Lys Leu Arg Met Glu  
 35 40 45  
 Gln Glu Glu Glu Leu Lys Asp Met Ser Lys Ile Ile Leu Asn Ala Lys  
 50 55 60  
 Cys His Ala Ile Arg Asp Ala Gln Ile Leu Glu Lys Gln Gln Ile Gln  
 65 70 75 80  
 Lys Glu Leu Asp Thr Glu Glu Lys Arg Leu Asp Gln Met Met Glu Val  
 85 90 95  
 Glu Arg Gln Lys Ser Ile Gln Arg Gln Glu Glu Leu Glu Arg Lys Arg  
 100 105 110  
 Arg Glu Glu Arg Ile Arg Gly Arg Arg Gln Ile Val Glu Gln Met Glu  
 115 120 125  
 Lys Asn Gln Glu Glu Arg Ser Leu Leu Ala Glu Gln Arg Glu Gln Glu  
 130 135 140  
 Lys Glu Gln Met Leu Glu Tyr Met Glu Gln Leu Gln Glu Glu Asp Leu  
 145 150 155 160  
 Lys Asp Met Glu Arg Arg Gln Gln Gln Lys Leu Lys Met Gln Ala Glu  
 165 170 175  
 Ile Lys Arg Ile Asn Asp Glu Asn Gln Lys Gln Lys Ala Glu Leu Leu

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1

180					185					190					
Ala	Gln	Glu	Lys	Leu	Ala	Asp	Gln	Met	Val	Met	Glu	Phe	Thr	Lys	Lys
	195						200					205			
Lys	Met	Ala	Arg	Glu	Ala	Glu	Phe	Glu	Ala	Glu	Gln	Glu	Arg	Ile	Arg
	210					215					220				
Arg	Glu	Lys	Glu	Lys	Glu	Ile	Ala	Arg	Leu	Arg	Ala	Met	Gln	Glu	Lys
225				230					235						240
Ala	Gln	Asp	Tyr	Gln	Ala	Glu	Gln	Asp	Ala	Leu	Arg	Ala	Lys	Arg	Asn
			245					250						255	
Gln	Glu	Val	Ala	Asp	Arg	Glu	Trp	Arg	Arg	Lys	Glu	Lys	Glu	Asn	Ala
		260					265						270		
Arg	Lys	Lys	Met	Glu	Ala	Glu	Leu	Arg	Lys	Ser	Arg	Leu	Glu	Gln	Val
	275						280						285		
Ala	Phe	Lys	Glu	His	Ala	Leu	Ala	Val	Gln	Val	His	Gly	Thr	Gly	Met
	290					295					300				
Ser	Ser	Arg	Gly	Phe	Phe	Gly	Leu	Arg	Glu	Asn	Arg	Leu	Arg	Arg	Ser
305				310					315						320
Gly	Trp	Arg	Arg	Arg	Lys	Arg	Pro	Gln	Gly	Ala	Tyr	Ser	Met	Pro	Met
			325					330						335	
Ser	Ser	Gly	Ala	Arg	Cys	Ala	Arg	Thr	Ser	Arg	Arg	Lys	Cys	Arg	Thr
		340					345						350		
Gly	Leu	Pro	Pro	Leu	Arg	Gly	Ala	Gly	Ala	Ser	Lys	Arg	Arg	Pro	Arg
	355					360						365			
Asn	Ala	Val	Ser	Ala	Ser	Met	Arg	Ser	Arg	Gly	Lys	Ser	Leu	Lys	Ser
	370					375					380				

<210> 61  
 <211> 510  
 <212> PRT  
 <213> homo sapiens  
 <400> 61

Met	Tyr	Arg	Ala	Leu	Arg	Leu	Leu	Ala	Arg	Ser	Arg	Pro	Leu	Val	Arg
1				5					10					15	
Ala	Pro	Ala	Ala	Ala	Leu	Ala	Ser	Ala	Pro	Gly	Leu	Gly	Gly	Ala	Ala
			20					25					30		
Val	Pro	Ser	Phe	Trp	Pro	Pro	Asn	Ala	Ala	Arg	Met	Ala	Ser	Gln	Asn
		35					40					45			
Ser	Phe	Arg	Ile	Glu	Tyr	Asp	Thr	Phe	Gly	Glu	Leu	Lys	Val	Pro	Asn
	50					55					60				
Asp	Lys	Tyr	Tyr	Gly	Ala	Gln	Thr	Val	Arg	Ser	Thr	Met	Asn	Phe	Lys
65					70					75					80

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Ile	Gly	Gly	Val	Thr	Glu	Arg	Met	Pro	Thr	Pro	Val	Ile	Lys	Ala	Phe	85	90	95
Gly	Ile	Leu	Lys	Arg	Ala	Ala	Ala	Glu	Val	Asn	Gln	Asp	Tyr	Gly	Leu	100	105	110
Asp	Pro	Lys	Ile	Ala	Asn	Ala	Ile	Met	Lys	Ala	Ala	Asp	Glu	Val	Ala	115	120	125
Glu	Gly	Lys	Leu	Asn	Asp	His	Phe	Pro	Leu	Val	Val	Trp	Gln	Thr	Gly	130	135	140
Ser	Gly	Thr	Gln	Thr	Asn	Met	Asn	Val	Asn	Glu	Val	Ile	Ser	Asn	Arg	145	150	155
Ala	Ile	Glu	Met	Leu	Gly	Gly	Glu	Leu	Gly	Ser	Lys	Ile	Pro	Val	His	165	170	175
Pro	Asn	Asp	His	Val	Asn	Lys	Ser	Gln	Ser	Ser	Asn	Asp	Thr	Phe	Pro	180	185	190
Thr	Ala	Met	His	Ile	Ala	Ala	Ala	Ile	Glu	Val	His	Glu	Val	Leu	Leu	195	200	205
Pro	Gly	Leu	Gln	Lys	Leu	His	Asp	Ala	Leu	Asp	Ala	Lys	Ser	Lys	Glu	210	215	220
Phe	Ala	Gln	Ile	Ile	Lys	Ile	Gly	Arg	Thr	His	Thr	Gln	Asp	Ala	Val	225	230	235
Pro	Leu	Thr	Leu	Gly	Gln	Glu	Phe	Ser	Gly	Tyr	Val	Gln	Gln	Val	Lys	245	250	255
Tyr	Ala	Met	Thr	Arg	Ile	Lys	Ala	Ala	Met	Pro	Arg	Ile	Tyr	Glu	Leu	260	265	270
Ala	Ala	Gly	Gly	Thr	Ala	Val	Gly	Thr	Gly	Leu	Asn	Thr	Arg	Ile	Gly	275	280	285
Phe	Ala	Glu	Lys	Val	Ala	Ala	Lys	Val	Ala	Ala	Leu	Thr	Gly	Leu	Pro	290	295	300
Phe	Val	Thr	Ala	Pro	Asn	Lys	Phe	Glu	Ala	Leu	Ala	Ala	His	Asp	Ala	305	310	315
Leu	Val	Glu	Leu	Ser	Gly	Ala	Met	Asn	Thr	Thr	Ala	Cys	Ser	Leu	Met	325	330	335
Lys	Ile	Ala	Asn	Asp	Ile	Arg	Phe	Leu	Gly	Ser	Gly	Pro	Arg	Ser	Gly	340	345	350
Leu	Gly	Glu	Leu	Ile	Leu	Pro	Glu	Asn	Glu	Pro	Gly	Ser	Ser	Ile	Met	355	360	365
Pro	Gly	Lys	Val	Asn	Pro	Thr	Gln	Cys	Glu	Ala	Met	Thr	Met	Val	Ala	370	375	380
Ala	Gln	Val	Met	Gly	Asn	His	Val	Ala	Val	Thr	Val	Gly	Gly	Ser	Asn	385	390	395

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Gly His Phe Glu Leu Asn Val Phe Lys Pro Met Met Ile Lys Asn Val  
 405 410 415  
 Leu His Ser Ala Arg Leu Leu Gly Asp Ala Ser Val Ser Phe Thr Glu  
 420 425 430  
 Asn Cys Val Val Gly Ile Gln Ala Asn Thr Glu Arg Ile Asn Lys Leu  
 435 440 445  
 Met Asn Glu Ser Leu Met Leu Val Thr Ala Leu Asn Pro His Ile Gly  
 450 455 460  
 Tyr Asp Lys Ala Ala Lys Ile Ala Lys Thr Ala His Lys Asn Gly Ser  
 465 470 475 480  
 Thr Leu Lys Glu Thr Ala Ile Glu Leu Gly Tyr Leu Thr Ala Glu Gln  
 485 490 495  
 Phe Asp Glu Trp Val Lys Pro Lys Asp Met Leu Gly Pro Lys  
 500 505 510

<210> 62  
 <211> 937  
 <212> PRT  
 <213> homo sapiens

<400> 62

Met Arg Lys Ser Phe Ser Gln Pro Gly Leu Arg Ser Leu Ala Phe Arg  
 1 5 10 15  
 Lys Glu Leu Gln Asp Gly Gly Leu Arg Ser Ser Gly Phe Phe Ser Ser  
 20 25 30  
 Phe Glu Glu Ser Asp Ile Glu Asn His Leu Ile Ser Gly His Asn Ile  
 35 40 45  
 Val Gln Pro Thr Asp Ile Glu Glu Asn Arg Thr Met Leu Phe Thr Ile  
 50 55 60  
 Gly Gln Ser Glu Val Tyr Leu Ile Ser Pro Asp Thr Lys Lys Ile Ala  
 65 70 75 80  
 Leu Glu Lys Asn Phe Lys Glu Ile Ser Phe Cys Ser Gln Gly Ile Arg  
 85 90 95  
 His Val Asp His Phe Gly Phe Ile Cys Arg Glu Ser Ser Gly Gly Gly  
 100 105 110  
 Gly Phe His Phe Val Cys Tyr Val Phe Gln Cys Thr Asn Glu Ala Leu  
 115 120 125  
 Val Asp Glu Ile Met Met Thr Leu Lys Gln Ala Phe Thr Val Ala Ala  
 130 135 140  
 Val Gln Gln Thr Ala Lys Ala Pro Ala Gln Leu Cys Glu Gly Cys Pro  
 145 150 155 160  
 Leu Gln Ser Leu His Lys Leu Cys Glu Arg Ile Glu Gly Met Asn Ser  
 165 170 175

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Ser Lys Thr Lys Leu Glu Leu Gln Lys His Leu Thr Thr Leu Thr Asn  
 180 185 190  
 Gln Glu Gln Ala Thr Ile Phe Glu Glu Val Gln Lys Leu Arg Pro Arg  
 195 200 205  
 Asn Glu Gln Arg Glu Asn Glu Leu Ile Ile Ser Phe Leu Arg Cys Leu  
 210 215 220  
 Tyr Glu Glu Lys Gln Lys Glu His Ile His Ile Gly Glu Met Lys Gln  
 225 230 235 240  
 Thr Ser Gln Met Ala Ala Glu Asn Ile Gly Ser Glu Leu Pro Pro Ser  
 245 250 255  
 Ala Thr Arg Phe Arg Leu Asp Met Leu Lys Asn Lys Ala Lys Arg Ser  
 260 265 270  
 Leu Thr Glu Ser Leu Glu Ser Ile Leu Ser Arg Gly Asn Lys Ala Arg  
 275 280 285  
 Gly Leu Gln Glu His Ser Ile Ser Val Asp Leu Asp Ser Ser Leu Ser  
 290 295 300  
 Ser Thr Leu Ser Asn Thr Ser Lys Glu Pro Ser Val Cys Glu Lys Glu  
 305 310 315 320  
 Ala Leu Pro Ile Ser Glu Ser Ser Phe Lys Leu Leu Gly Ser Ser Glu  
 325 330 335  
 Asp Leu Ser Ser Asp Ser Glu Ser His Leu Pro Glu Glu Pro Ala Pro  
 340 345 350  
 Leu Ser Pro Gln Gln Ala Phe Arg Arg Arg Ala Asn Thr Leu Ser His  
 355 360 365  
 Phe Pro Ile Glu Cys Gln Glu Pro Pro Gln Pro Ala Arg Gly Ser Pro  
 370 375 380  
 Gly Val Ser Gln Arg Lys Leu Met Arg Tyr His Ser Val Ser Thr Glu  
 385 390 395 400  
 Thr Pro His Glu Arg Lys Asp Phe Glu Ser Lys Ala Asn His Leu Gly  
 405 410 415  
 Asp Ser Gly Gly Thr Pro Val Lys Thr Arg Arg His Ser Trp Arg Gln  
 420 425 430  
 Gln Ile Phe Leu Arg Val Ala Thr Pro Gln Lys Ala Cys Asp Ser Ser  
 435 440 445  
 Ser Arg Tyr Glu Asp Tyr Ser Glu Leu Gly Glu Leu Pro Pro Arg Ser  
 450 455 460  
 Pro Leu Glu Pro Val Cys Glu Asp Gly Pro Phe Gly Pro Pro Pro Glu  
 465 470 475 480  
 Glu Lys Lys Arg Thr Ser Arg Glu Leu Arg Glu Leu Trp Gln Lys Ala  
 485 490 495

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Ile Leu Gln Gln Ile Leu Leu Leu Arg Met Glu Lys Glu Asn Gln Lys  
 500 505 510

Leu Gln Ala Ser Glu Asn Asp Leu Leu Asn Lys Arg Leu Lys Leu Asp  
 515 520 525

Tyr Glu Glu Ile Thr Pro Cys Leu Lys Glu Val Thr Thr Val Trp Glu  
 530 535 540

Lys Met Leu Ser Thr Pro Gly Arg Ser Lys Ile Lys Phe Asp Met Glu  
 545 550 555 560

Lys Met His Ser Ala Val Gly Gln Gly Val Pro Arg His His Arg Gly  
 565 570 575

Glu Ile Trp Lys Phe Leu Ala Glu Gln Phe His Leu Lys His Gln Phe  
 580 585 590

Pro Ser Lys Gln Gln Pro Lys Asp Val Pro Tyr Lys Glu Leu Leu Lys  
 595 600 605

Gln Leu Thr Ser Gln Gln His Ala Ile Leu Ile Asp Leu Gly Arg Thr  
 610 615 620

Phe Pro Thr His Pro Tyr Phe Ser Ala Gln Leu Gly Ala Gly Gln Leu  
 625 630 635 640

Ser Leu Tyr Asn Ile Leu Lys Ala Tyr Ser Leu Leu Asp Gln Glu Val  
 645 650 655

Gly Tyr Cys Gln Gly Leu Ser Phe Val Ala Gly Ile Leu Leu Leu His  
 660 665 670

Met Ser Glu Glu Glu Ala Phe Lys Met Leu Lys Phe Leu Met Phe Asp  
 675 680 685

Met Gly Leu Arg Lys Gln Tyr Arg Pro Asp Met Ile Ile Leu Gln Ile  
 690 695 700

Gln Met Tyr Gln Leu Ser Arg Leu Leu His Asp Tyr His Arg Asp Leu  
 705 710 715 720

Tyr Asn His Leu Glu Glu His Glu Ile Gly Pro Ser Leu Tyr Ala Ala  
 725 730 735

Pro Trp Phe Leu Thr Met Phe Ala Ser Gln Phe Pro Leu Gly Phe Val  
 740 745 750

Ala Arg Val Phe Asp Met Ile Phe Leu Gln Gly Thr Glu Val Ile Phe  
 755 760 765

Lys Val Ala Leu Ser Leu Leu Gly Ser His Lys Pro Leu Ile Leu Gln  
 770 775 780

His Glu Asn Leu Glu Thr Ile Val Asp Phe Ile Lys Ser Thr Leu Pro  
 785 790 795 800

Asn Leu Gly Leu Val Gln Met Glu Lys Thr Ile Asn Gln Val Phe Glu  
 805 810 815

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Met Asp Ile Ala Lys Gln Leu Gln Ala Tyr Glu Val Glu Tyr His Val  
                   820                  825                  830  
 Leu Gln Glu Glu Leu Ile Asp Ser Ser Pro Leu Ser Asp Asn Gln Arg  
                   835                  840                  845  
 Met Asp Lys Leu Glu Lys Thr Asn Ser Ser Leu Arg Lys Gln Asn Leu  
                   850                  855                  860  
 Asp Leu Leu Glu Gln Leu Gln Val Ala Asn Gly Arg Ile Gln Ser Leu  
                   865                  870                  875                  880  
 Glu Ala Thr Ile Glu Lys Leu Leu Ser Ser Glu Ser Lys Leu Lys Gln  
                   885                  890                  895  
 Ala Met Leu Thr Leu Glu Leu Glu Arg Ser Ala Leu Leu Gln Thr Val  
                   900                  905                  910  
 Glu Glu Leu Arg Arg Arg Ser Ala Glu Pro Ser Asp Arg Glu Pro Glu  
                   915                  920                  925  
 Cys Thr Gln Pro Glu Pro Thr Gly Asp  
                   930                  935  
 <210> 63  
 <211> 618  
 <212> PRT  
 <213> homo sapiens  
 <400> 63  
 Met His Lys Thr Ala Ser Gln Arg Leu Phe Pro Gly Pro Ser Tyr Gln  
   1                  5                  10                  15  
 Asn Ile Lys Ser Ile Met Glu Asp Ser Thr Ile Leu Ser Asp Trp Thr  
                   20                  25                  30  
 Asn Ser Asn Lys Gln Lys Met Lys Tyr Asp Phe Ser Cys Glu Leu Tyr  
                   35                  40                  45  
 Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu  
                   50                  55                  60  
 Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys  
                   65                  70                  75                  80  
 Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Leu Gly  
                   85                  90                  95  
 Asp Ser Pro Ile Gln Lys His Lys Gln Leu Tyr Pro Ser Cys Ser Phe  
                   100                  105                  110  
 Ile Gln Asn Leu Val Ser Ala Ser Leu Gly Ser Thr Ser Lys Asn Thr  
                   115                  120                  125  
 Ser Pro Met Arg Asn Ser Phe Ala His Ser Leu Ser Pro Thr Leu Glu  
                   130                  135                  140  
 His Ser Ser Leu Phe Ser Gly Ser Tyr Ser Ser Leu Ser Pro Asn Pro



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145		150		155		160
Leu Asn Ser Arg	Ala Val Glu Asp Ile Ser Ser Ser Arg Thr Asn Pro					
	165		170			175
Tyr Ser Tyr Ala Met Ser Thr Glu Glu Ala Arg Phe Leu Thr Tyr His						
	180		185			190
Met Trp Pro Leu Thr Phe Leu Ser Pro Ser Glu Leu Ala Arg Ala Gly						
	195		200			205
Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys Gly						
	210		215			220
Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Asp Ala Met Ser Glu His						
	225		230			235
Arg Arg His Phe Pro Asn Cys Pro Phe Leu Glu Asn Ser Leu Glu Thr						
	245		250			255
Leu Arg Phe Ser Ile Ser Asn Leu Ser Met Gln Thr His Ala Ala Arg						
	260		265			270
Met Arg Thr Phe Met Tyr Trp Pro Ser Ser Val Pro Val Gln Pro Glu						
	275		280			285
Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Arg Asn Asp Asp Val						
	290		295			300
Lys Cys Phe Cys Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser Gly Asp						
	305		310			315
Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg Cys Glu Phe Leu						
	325		330			335
Ile Arg Met Lys Gly Gln Glu Phe Val Asp Glu Ile Gln Gly Arg Tyr						
	340		345			350
Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Thr Thr Gly Glu						
	355		360			365
Glu Asn Ala Asp Pro Pro Ile Ile His Phe Gly Pro Gly Glu Ser Ser						
	370		375			380
Ser Glu Asp Ala Val Met Met Asn Thr Pro Val Val Lys Ser Ala Leu						
	385		390			395
Glu Met Gly Phe Asn Arg Asp Leu Val Lys Gln Thr Val Gln Ser Lys						
	405		410			415
Ile Leu Thr Thr Gly Glu Asn Tyr Lys Thr Val Asn Asp Ile Val Ser						
	420		425			430
Ala Leu Leu Asn Ala Glu Asp Glu Lys Arg Glu Glu Glu Lys Glu Lys						
	435		440			445
Gln Ala Glu Glu Met Ala Ser Asp Asp Leu Ser Leu Ile Arg Lys Asn						
	450		455			460
Arg Met Ala Leu Phe Gln Gln Leu Thr Cys Val Leu Pro Ile Leu Asp						

465				470				475				480			
Asn	Leu	Leu	Lys	Ala	Asn	Val	Ile	Asn	Lys	Gln	Glu	His	Asp	Ile	Ile
				485					490					495	
Lys	Gln	Lys	Thr	Gln	Ile	Pro	Leu	Gln	Ala	Arg	Glu	Leu	Ile	Asp	Thr
			500					505					510		
Ile	Leu	Val	Lys	Gly	Asn	Ala	Ala	Ala	Asn	Ile	Phe	Lys	Asn	Cys	Leu
			515				520					525			
Lys	Glu	Ile	Asp	Ser	Thr	Leu	Tyr	Lys	Asn	Leu	Phe	Val	Asp	Lys	Asn
			530			535					540				
Met	Lys	Tyr	Ile	Pro	Thr	Glu	Asp	Val	Ser	Gly	Leu	Ser	Leu	Glu	Glu
545					550					555					560
Gln	Leu	Arg	Arg	Leu	Gln	Glu	Glu	Arg	Thr	Cys	Lys	Val	Cys	Met	Asp
				565					570					575	
Lys	Glu	Val	Ser	Val	Val	Phe	Ile	Pro	Cys	Gly	His	Leu	Val	Val	Cys
			580					585					590		
Gln	Glu	Cys	Ala	Pro	Ser	Leu	Arg	Lys	Cys	Pro	Ile	Cys	Arg	Gly	Ile
			595				600					605			
Ile	Lys	Gly	Thr	Val	Arg	Thr	Phe	Leu	Ser						
			610			615									
<210> 64															
<211> 539															
<212> PRT															
<213> homo sapiens															
<400> 64															
Met	Thr	Ser	Leu	Trp	Gly	Lys	Gly	Thr	Gly	Cys	Lys	Leu	Phe	Lys	Phe
1				5					10					15	
Arg	Val	Ala	Ala	Ala	Pro	Ala	Ser	Gly	Ala	Leu	Arg	Arg	Leu	Thr	Pro
			20					25					30		
Ser	Ala	Ser	Leu	Pro	Pro	Ala	Gln	Leu	Leu	Leu	Arg	Ala	Val	Arg	Arg
			35				40					45			
Arg	Ser	His	Pro	Val	Arg	Asp	Tyr	Ala	Ala	Gln	Thr	Ser	Pro	Ser	Pro
			50			55					60				
Lys	Ala	Gly	Ala	Ala	Thr	Gly	Arg	Ile	Val	Ala	Val	Ile	Gly	Ala	Val
65					70					75					80
Val	Asp	Val	Gln	Phe	Asp	Glu	Gly	Leu	Pro	Pro	Ile	Leu	Asn	Ala	Leu
				85					90				95		
Glu	Val	Gln	Gly	Arg	Glu	Thr	Arg	Leu	Val	Leu	Glu	Val	Ala	Gln	His
			100					105					110		
Leu	Gly	Glu	Ser	Thr	Val	Arg	Thr	Ile	Ala	Met	Asp	Gly	Thr	Glu	Gly
			115				120					125			

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Leu Val Arg Gly Gln Lys Val Leu Asp Ser Gly Ala Pro Ile Lys Ile  
 130 135 140  
 Pro Val Gly Pro Glu Thr Leu Gly Arg Ile Met Asn Val Ile Gly Glu  
 145 150 155 160  
 Pro Ile Asp Glu Arg Gly Pro Ile Lys Thr Lys Gln Phe Ala Pro Ile  
 165 170 175  
 His Ala Glu Ala Pro Glu Phe Met Glu Met Ser Val Glu Gln Glu Ile  
 180 185 190  
 Leu Val Thr Gly Ile Lys Val Val Asp Leu Leu Ala Pro Tyr Ala Lys  
 195 200 205  
 Gly Gly Lys Ile Gly Leu Phe Gly Gly Ala Gly Val Gly Lys Thr Val  
 210 215 220  
 Leu Ile Met Glu Leu Ile Asn Asn Val Ala Lys Ala His Gly Gly Tyr  
 225 230 235 240  
 Ser Val Phe Ala Gly Val Gly Glu Arg Thr Arg Glu Gly Asn Asp Leu  
 245 250 255  
 Tyr His Glu Met Ile Glu Ser Gly Val Ile Asn Leu Lys Asp Ala Thr  
 260 265 270  
 Ser Lys Val Ala Leu Val Tyr Gly Gln Met Asn Gln Pro Pro Gly Ala  
 275 280 285  
 Arg Ala Arg Val Ala Leu Thr Gly Leu Thr Val Ala Glu Tyr Phe Arg  
 290 295 300  
 Asp Gln Glu Gly Gln Asp Val Leu Leu Phe Ile Asp Asn Ile Phe Arg  
 305 310 315 320  
 Phe Thr Gln Ala Gly Ser Glu Val Ser Ala Leu Leu Gly Arg Ile Pro  
 325 330 335  
 Ser Ala Val Gly Tyr Gln Pro Thr Leu Ala Thr Asp Met Gly Thr Met  
 340 345 350  
 Gln Glu Arg Ile Thr Thr Thr Lys Lys Gly Ser Ile Thr Ser Val Gln  
 355 360 365  
 Ala Ile Tyr Val Pro Ala Asp Asp Leu Thr Asp Pro Ala Pro Ala Thr  
 370 375 380  
 Thr Phe Ala His Leu Asp Ala Thr Thr Val Leu Ser Arg Ala Ile Ala  
 385 390 395 400  
 Glu Leu Gly Ile Tyr Pro Ala Val Asp Pro Leu Asp Ser Thr Ser Arg  
 405 410 415  
 Ile Met Asp Pro Asn Ile Val Gly Ser Glu His Tyr Asp Val Ala Arg  
 420 425 430  
 Gly Val Gln Lys Ile Leu Gln Asp Tyr Lys Ser Leu Gln Asp Ile Ile  
 435 440 445

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Ala Ile Leu Gly Met Asp Glu Leu Ser Glu Glu Asp Lys Leu Thr Val  
 450 455 460

Ser Arg Ala Arg Lys Ile Gln Arg Phe Leu Ser Gln Pro Phe Gln Val  
 465 470 475 480

Ala Glu Val Phe Thr Gly His Met Gly Lys Leu Val Pro Leu Lys Glu  
 485 490 495

Thr Ile Lys Gly Phe Gln Gln Ile Leu Ala Gly Glu Tyr Asp His Leu  
 500 505 510

Pro Glu Gln Ala Phe Tyr Met Val Gly Pro Ile Glu Glu Ala Val Ala  
 515 520 525

Lys Ala Asp Lys Leu Ala Glu Glu His Ser Ser  
 530 535

<210> 65

<211> 772

<212> PRT

<213> homo sapiens

<400> 65

Met Ala Ala Glu Ser Ala Leu Gln Val Val Glu Lys Leu Gln Ala Arg  
 1 5 10 15

Leu Ala Ala Asn Pro Asp Pro Lys Lys Leu Leu Lys Tyr Leu Lys Lys  
 20 25 30

Leu Ser Thr Leu Pro Ile Thr Val Asp Ile Leu Ala Glu Thr Gly Val  
 35 40 45

Gly Lys Thr Val Asn Ser Leu Arg Lys His Glu His Val Gly Ser Phe  
 50 55 60

Ala Arg Asp Leu Val Ala Gln Trp Lys Lys Leu Val Pro Val Glu Arg  
 65 70 75 80

Asn Ala Glu Pro Asp Glu Gln Asp Phe Glu Lys Ser Asn Ser Arg Lys  
 85 90 95

Arg Pro Arg Asp Ala Leu Gln Lys Glu Glu Glu Met Glu Gly Asp Tyr  
 100 105 110

Gln Glu Thr Trp Lys Ala Thr Gly Ser Arg Ser Tyr Ser Pro Asp His  
 115 120 125

Arg Gln Lys Lys His Arg Lys Leu Ser Glu Leu Glu Arg Pro His Lys  
 130 135 140

Val Ser His Gly His Glu Arg Arg Asp Glu Arg Lys Arg Cys His Arg  
 145 150 155 160

Met Ser Pro Thr Tyr Ser Ser Asp Pro Glu Ser Ser Asp Tyr Gly His  
 165 170 175

Val Gln Ser Pro Pro Ser Cys Thr Ser Pro His Gln Met Tyr Val Asp  
 180 185 190

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His Tyr Arg Ser Leu Glu Glu Asp Gln Glu Pro Ile Val Ser His Gln  
 195 200 205  
 Lys Pro Gly Lys Gly His Ser Asn Ala Phe Gln Asp Arg Leu Gly Ala  
 210 215 220  
 Ser Gln Glu Arg His Leu Gly Glu Pro His Gly Lys Gly Val Val Ser  
 225 230 235 240  
 Gln Asn Lys Glu His Lys Ser Ser His Lys Asp Lys Arg Pro Val Asp  
 245 250 255  
 Ala Lys Ser Asp Glu Lys Ala Ser Val Val Ser Arg Glu Lys Ser His  
 260 265 270  
 Lys Ala Leu Ser Lys Glu Glu Asn Arg Arg Pro Pro Ser Gly Asp Asn  
 275 280 285  
 Ala Arg Glu Lys Pro Pro Ser Ser Gly Val Lys Lys Glu Lys Asp Arg  
 290 295 300  
 Glu Gly Ser Ser Leu Lys Lys Cys Leu Pro Pro Ser Glu Ala Ala  
 305 310 315 320  
 Ser Asp Asn His Leu Lys Lys Pro Lys His Arg Asp Pro Glu Lys Ala  
 325 330 335  
 Lys Leu Asp Lys Ser Lys Gln Gly Leu Asp Ser Phe Asp Thr Gly Lys  
 340 345 350  
 Gly Ala Gly Asp Leu Leu Pro Lys Val Lys Glu Lys Gly Ser Asn Asn  
 355 360 365  
 Leu Lys Thr Pro Glu Gly Lys Val Lys Thr Asn Leu Asp Arg Lys Ser  
 370 375 380  
 Leu Gly Ser Leu Pro Lys Val Glu Glu Thr Asp Met Glu Asp Glu Phe  
 385 390 395 400  
 Glu Gln Pro Thr Met Ser Phe Glu Ser Tyr Leu Ser Tyr Asp Gln Pro  
 405 410 415  
 Arg Lys Lys Lys Lys Lys Ile Val Lys Thr Ser Ala Thr Ala Leu Gly  
 420 425 430  
 Asp Lys Gly Leu Lys Lys Asn Asp Ser Lys Ser Thr Gly Lys Asn Leu  
 435 440 445  
 Asp Ser Val Gln Lys Leu Pro Lys Val Asn Lys Thr Lys Ser Glu Lys  
 450 455 460  
 Pro Ala Gly Ala Asp Leu Ala Lys Leu Arg Lys Val Pro Asp Val Leu  
 465 470 475 480  
 Pro Val Leu Pro Asp Leu Pro Leu Pro Ala Ile Gln Ala Asn Tyr Arg  
 485 490 495  
 Pro Leu Pro Ser Leu Glu Leu Ile Ser Ser Phe Gln Pro Lys Arg Lys  
 500 505 510

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Ala Phe Ser Ser Pro Gln Glu Glu Glu Glu Ala Gly Phe Thr Gly Arg  
 515 520 525  
 Arg Met Asn Ser Lys Met Gln Val Tyr Ser Gly Ser Lys Cys Ala Tyr  
 530 535 540  
 Leu Pro Lys Met Met Thr Leu His Gln Gln Cys Ile Arg Val Leu Lys  
 545 550 555 560  
 Asn Asn Ile Asp Ser Ile Phe Glu Val Gly Gly Val Pro Tyr Ser Val  
 565 570 575  
 Leu Glu Pro Val Leu Glu Arg Cys Thr Pro Asp Gln Leu Tyr Arg Ile  
 580 585 590  
 Glu Glu Tyr Asn His Val Leu Ile Glu Glu Thr Asp Gln Leu Trp Lys  
 595 600 605  
 Val His Cys His Arg Asp Phe Lys Glu Glu Arg Pro Glu Glu Tyr Glu  
 610 615 620  
 Ser Trp Arg Glu Met Tyr Leu Arg Leu Gln Asp Ala Arg Glu Gln Arg  
 625 630 635 640  
 Leu Arg Val Leu Thr Lys Asn Ile Gln Phe Ala His Ala Asn Lys Pro  
 645 650 655  
 Lys Gly Arg Gln Ala Lys Met Ala Phe Val Asn Ser Val Ala Lys Pro  
 660 665 670  
 Pro Arg Asp Val Arg Arg Arg Gln Glu Lys Phe Gly Thr Gly Gly Ala  
 675 680 685  
 Ala Val Pro Glu Lys Ile Lys Ile Lys Pro Ala Pro Tyr Pro Met Gly  
 690 695 700  
 Ser Ser His Ala Ser Ala Ser Ser Ile Ser Phe Asn Pro Ser Pro Glu  
 705 710 715 720  
 Glu Pro Ala Tyr Asp Gly Pro Ser Thr Ser Ser Ala His Leu Ala Pro  
 725 730 735  
 Val Val Ser Ser Thr Val Ser Tyr Asp Pro Arg Lys Pro Thr Val Lys  
 740 745 750  
 Lys Ile Ala Pro Met Met Ala Lys Thr Ile Lys Ala Phe Lys Asn Arg  
 755 760 765  
 Phe Ser Arg Arg  
 770  
 <210> 66  
 <211> 886  
 <212> PRT  
 <213> homo sapiens  
 <400> 66  
 Met Ser Gly Phe Ser Pro Glu Leu Ile Asp Tyr Leu Glu Gly Lys Ile

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1	5	10	15
Ser Phe Glu Glu Phe Glu Arg Arg Arg Glu Glu Arg Lys Thr Arg Glu	20	25	30
Lys Lys Ser Leu Gln Glu Lys Gly Lys Leu Ser Ala Glu Glu Asn Pro	35	40	45
Asp Asp Ser Glu Val Pro Ser Ser Ser Gly Ile Asn Ser Thr Lys Ser	50	55	60
Gln Asp Lys Asp Val Asn Glu Gly Glu Thr Ser Asp Gly Val Arg Lys	65	70	75
Ser Val His Lys Val Phe Ala Ser Met Leu Gly Glu Asn Glu Asp Asp	85	90	95
Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Thr	100	105	110
Pro Glu Gln Pro Thr Ala Gly Asp Val Phe Val Leu Glu Met Val Leu	115	120	125
Asn Arg Glu Thr Lys Lys Met Met Lys Glu Lys Arg Pro Arg Ser Lys	130	135	140
Leu Pro Arg Ala Leu Arg Gly Leu Met Gly Glu Ala Asn Ile Arg Phe	145	150	155
Ala Arg Gly Glu Arg Glu Glu Ala Ile Leu Met Cys Met Glu Ile Ile	165	170	175
Arg Gln Ala Pro Leu Ala Tyr Glu Pro Phe Ser Thr Leu Ala Met Ile	180	185	190
Tyr Glu Asp Gln Gly Asp Met Glu Lys Ser Leu Gln Phe Glu Leu Ile	195	200	205
Ala Ala His Leu Asn Pro Ser Asp Thr Glu Glu Trp Val Arg Leu Ala	210	215	220
Glu Met Ser Leu Glu Gln Asp Asn Ile Lys Gln Ala Ile Phe Cys Tyr	225	230	235
Thr Lys Ala Leu Lys Tyr Glu Pro Thr Asn Val Arg Tyr Leu Trp Glu	245	250	255
Arg Ser Ser Leu Tyr Glu Gln Met Gly Asp His Lys Met Ala Met Asp	260	265	270
Gly Tyr Arg Arg Ile Leu Asn Leu Leu Ser Pro Ser Asp Gly Glu Arg	275	280	285
Phe Met Gln Leu Ala Arg Asp Met Ala Lys Ser Tyr Tyr Glu Ala Asn	290	295	300
Asp Val Thr Ser Ala Ile Asn Ile Ile Asp Glu Ala Phe Ser Lys His	305	310	315
Gln Gly Leu Val Ser Met Glu Asp Val Asn Ile Ala Ala Glu Leu Tyr			

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325										330					335				
Ile	Ser	Asn	Lys	Gln	Tyr	Asp	Lys	Ala	Leu	Glu	Ile	Ile	Thr	Asp	Phe				
			340					345					350						
Ser	Gly	Ile	Val	Leu	Glu	Lys	Lys	Thr	Ser	Glu	Glu	Gly	Thr	Ser	Glu				
		355					360					365							
Glu	Asn	Lys	Ala	Pro	Glu	Asn	Val	Thr	Cys	Thr	Ile	Pro	Asp	Gly	Val				
	370					375					380								
Pro	Ile	Asp	Ile	Thr	Val	Lys	Leu	Met	Val	Cys	Leu	Val	His	Leu	Asn				
385				390						395					400				
Ile	Leu	Glu	Pro	Leu	Asn	Pro	Leu	Leu	Thr	Thr	Leu	Val	Glu	Gln	Asn				
			405						410					415					
Pro	Glu	Asp	Met	Gly	Asp	Leu	Tyr	Leu	Asp	Val	Ala	Glu	Ala	Phe	Leu				
			420					425					430						
Asp	Val	Gly	Glu	Tyr	Asn	Ser	Ala	Leu	Pro	Leu	Leu	Ser	Ala	Leu	Val				
	435					440						445							
Cys	Ser	Glu	Arg	Tyr	Asn	Leu	Ala	Val	Val	Trp	Leu	Arg	His	Ala	Glu				
	450				455						460								
Cys	Leu	Lys	Ala	Leu	Gly	Tyr	Met	Glu	Arg	Ala	Ala	Glu	Ser	Tyr	Gly				
465				470					475					480					
Lys	Val	Val	Asp	Leu	Ala	Pro	Leu	His	Leu	Asp	Ala	Arg	Ile	Ser	Leu				
			485					490					495						
Ser	Thr	Leu	Gln	Gln	Gln	Leu	Gly	Gln	Pro	Glu	Lys	Ala	Leu	Glu	Ala				
		500						505					510						
Leu	Glu	Pro	Met	Tyr	Asp	Pro	Asp	Thr	Leu	Ala	Gln	Asp	Ala	Asn	Ala				
	515					520						525							
Ala	Gln	Gln	Glu	Leu	Lys	Leu	Leu	Leu	His	Arg	Ser	Thr	Leu	Leu	Phe				
	530				535						540								
Ser	Gln	Gly	Lys	Met	Tyr	Gly	Tyr	Val	Asp	Thr	Leu	Leu	Thr	Met	Leu				
545				550					555						560				
Ala	Met	Leu	Leu	Lys	Val	Ala	Met	Asn	Arg	Ala	Gln	Val	Cys	Leu	Ile				
			565					570						575					
Ser	Ser	Ser	Lys	Ser	Gly	Glu	Arg	His	Leu	Tyr	Leu	Ile	Lys	Val	Ser				
		580					585						590						
Arg	Asp	Lys	Ile	Ser	Asp	Ser	Asn	Asp	Gln	Glu	Ser	Ala	Asn	Cys	Asp				
	595					600						605							
Ala	Lys	Ala	Ile	Phe	Ala	Val	Leu	Thr	Ser	Val	Leu	Thr	Lys	Asp	Asp				
	610				615						620								
Trp	Trp	Asn	Leu	Leu	Leu	Lys	Ala	Ile	Tyr	Ser	Leu	Cys	Asp	Leu	Ser				
625			630						635					640					
Arg	Phe	Gln	Glu	Ala	Glu	Leu	Leu	Val	Asp	Ser	Ser	Leu	Glu	Tyr	Tyr				



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645					650					655					
Ser	Phe	Tyr	Asp	Asp	Arg	Gln	Lys	Arg	Lys	Glu	Leu	Glu	Tyr	Phe	Gly
			660					665					670		
Leu	Ser	Ala	Ala	Ile	Leu	Asp	Lys	Asn	Phe	Arg	Lys	Ala	Tyr	Asn	Tyr
		675					680					685			
Ile	Arg	Ile	Met	Val	Met	Glu	Asn	Val	Asn	Lys	Pro	Gln	Leu	Trp	Asn
	690					695					700				
Ile	Phe	Asn	Gln	Val	Thr	Met	His	Ser	Gln	Asp	Val	Arg	His	His	Arg
705					710					715					720
Phe	Cys	Leu	Arg	Leu	Met	Leu	Lys	Asn	Pro	Glu	Asn	His	Ala	Leu	Cys
				725					730						735
Val	Leu	Asn	Gly	His	Asn	Ala	Phe	Val	Ser	Gly	Ser	Phe	Lys	His	Ala
			740					745					750		
Leu	Gly	Gln	Tyr	Val	Gln	Ala	Phe	Arg	Thr	His	Pro	Asp	Glu	Pro	Leu
		755					760					765			
Tyr	Ser	Phe	Cys	Ile	Gly	Leu	Thr	Phe	Ile	His	Met	Ala	Ser	Gln	Lys
	770					775					780				
Tyr	Val	Leu	Arg	Arg	His	Ala	Leu	Ile	Val	Gln	Gly	Phe	Ser	Phe	Leu
785					790					795					800
Asn	Arg	Tyr	Leu	Ser	Leu	Arg	Gly	Pro	Cys	Gln	Glu	Ser	Phe	Tyr	Asn
				805					810					815	
Leu	Gly	Arg	Gly	Leu	His	Gln	Leu	Gly	Leu	Ile	His	Leu	Ala	Ile	His
			820					825					830		
Tyr	Tyr	Gln	Lys	Ala	Leu	Glu	Leu	Pro	Pro	Leu	Val	Val	Glu	Gly	Ile
		835					840					845			
Glu	Leu	Asp	Gln	Leu	Asp	Leu	Arg	Arg	Asp	Ile	Ala	Tyr	Asn	Leu	Ser
		850				855					860				
Leu	Ile	Tyr	Gln	Ser	Ser	Gly	Asn	Thr	Gly	Met	Ala	Gln	Thr	Leu	Leu
865					870					875					880
Tyr	Thr	Tyr	Cys	Ser	Ile										
				885											

<210> 67  
 <211> 1130  
 <212> PRT  
 <213> homo sapiens

<400> 67

Met	Lys	Glu	Ile	Cys	Arg	Ile	Cys	Ala	Arg	Glu	Leu	Cys	Gly	Asn	Gln
1				5					10					15	
Arg	Arg	Trp	Ile	Phe	His	Thr	Ala	Ser	Lys	Leu	Asn	Leu	Gln	Val	Leu
			20					25					30		

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Leu Ser His Val Leu Gly Lys Asp Val Pro Arg Asp Gly Lys Ala Glu  
                   35                                  40                                  45  
 Phe Ala Cys Ser Lys Cys Ala Phe Met Leu Asp Arg Ile Tyr Arg Phe  
           50                                  55                                  60  
 Asp Thr Val Ile Ala Arg Ile Glu Ala Leu Ser Ile Glu Arg Leu Gln  
   65                                  70                                  75                                  80  
 Lys Leu Leu Leu Glu Lys Asp Arg Leu Lys Phe Cys Ile Ala Ser Met  
                                   85                                  90                                  95  
 Tyr Arg Lys Asn Asn Asp Asp Ser Gly Ala Glu Ile Lys Ala Gly Asn  
                   100                                  105                                  110  
 Gly Thr Val Asp Met Ser Val Leu Pro Asp Ala Arg Tyr Ser Ala Leu  
                   115                                  120                                  125  
 Leu Gln Glu Asp Phe Ala Tyr Ser Gly Phe Glu Cys Trp Val Glu Asn  
           130                                  135                                  140  
 Glu Asp Gln Ile Gln Glu Pro His Ser Cys His Gly Ser Glu Gly Pro  
   145                                  150                                  155                                  160  
 Gly Asn Arg Pro Arg Arg Cys Arg Gly Cys Ala Ala Leu Arg Val Ala  
                   165                                  170                                  175  
 Asp Ser Asp Tyr Glu Ala Ile Cys Lys Val Pro Arg Lys Val Ala Arg  
                   180                                  185                                  190  
 Ser Ile Ser Cys Gly Pro Ser Ser Arg Trp Ser Thr Ser Ile Cys Thr  
           195                                  200                                  205  
 Glu Glu Pro Ala Leu Ser Glu Val Gly Pro Pro Asp Leu Ala Ser Thr  
           210                                  215                                  220  
 Lys Val Pro Pro Asp Gly Glu Ser Met Glu Glu Glu Thr Pro Gly Ser  
   225                                  230                                  235                                  240  
 Ser Val Glu Ser Leu Asp Ala Ser Val Gln Ala Ser Pro Pro Gln Gln  
                   245                                  250                                  255  
 Lys Asp Glu Glu Thr Glu Arg Ser Ala Lys Glu Leu Gly Lys Cys Asp  
                   260                                  265                                  270  
 Cys Cys Ser Asp Asp Gln Ala Pro Gln His Gly Cys Asn His Lys Leu  
           275                                  280                                  285  
 Glu Leu Ala Leu Ser Met Ile Lys Gly Leu Asp Tyr Lys Pro Ile Gln  
           290                                  295                                  300  
 Ser Pro Arg Gly Ser Arg Leu Pro Ile Pro Val Lys Ser Ser Leu Pro  
   305                                  310                                  315                                  320  
 Gly Ala Lys Pro Gly Pro Ser Met Thr Asp Gly Val Ser Ser Gly Phe  
                   325                                  330                                  335  
 Leu Asn Arg Ser Leu Lys Pro Leu Tyr Lys Thr Pro Val Ser Tyr Pro  
                   340                                  345                                  350

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Leu Glu Leu Ser Asp Leu Gln Glu Leu Trp Asp Asp Leu Cys Glu Asp  
 355 360 365  
 Tyr Leu Pro Leu Arg Val Gln Pro Met Thr Glu Glu Leu Leu Lys Gln  
 370 375 380  
 Gln Lys Leu Asn Ser His Glu Thr Thr Ile Thr Gln Gln Ser Val Ser  
 385 390 395 400  
 Asp Ser His Leu Ala Glu Leu Gln Glu Lys Ile Gln Gln Thr Glu Ala  
 405 410 415  
 Thr Asn Lys Ile Leu Gln Glu Lys Leu Asn Glu Met Ser Tyr Glu Leu  
 420 425 430  
 Lys Cys Ala Gln Glu Ser Ser Gln Lys Gln Asp Gly Thr Ile Gln Asn  
 435 440 445  
 Leu Lys Glu Thr Leu Lys Ser Arg Glu Arg Glu Thr Glu Glu Leu Tyr  
 450 455 460  
 Gln Val Ile Glu Gly Gln Asn Asp Thr Met Ala Lys Leu Arg Glu Met  
 465 470 475 480  
 Leu His Gln Ser Gln Leu Gly Gln Leu His Ser Ser Glu Gly Thr Ser  
 485 490 495  
 Pro Ala Gln Gln Gln Val Ala Leu Leu Asp Leu Gln Ser Ala Leu Phe  
 500 505 510  
 Cys Ser Gln Leu Glu Ile Gln Lys Leu Gln Arg Val Val Arg Gln Lys  
 515 520 525  
 Glu Arg Gln Leu Ala Asp Ala Lys Gln Cys Val Gln Phe Val Glu Ala  
 530 535 540  
 Ala Ala His Glu Ser Glu Gln Gln Lys Glu Ala Ser Trp Lys His Asn  
 545 550 555 560  
 Gln Glu Leu Arg Lys Ala Leu Gln Gln Leu Gln Glu Glu Leu Gln Asn  
 565 570 575  
 Lys Ser Gln Gln Leu Arg Ala Trp Glu Ala Glu Lys Tyr Asn Glu Ile  
 580 585 590  
 Arg Thr Gln Glu Gln Asn Ile Gln His Leu Asn His Ser Leu Ser His  
 595 600 605  
 Lys Glu Gln Leu Leu Gln Glu Phe Arg Glu Leu Leu Gln Tyr Arg Asp  
 610 615 620  
 Asn Ser Asp Lys Thr Leu Glu Ala Asn Glu Met Leu Leu Glu Lys Leu  
 625 630 635 640  
 Arg Gln Arg Ile His Asp Lys Ala Val Ala Leu Glu Arg Ala Ile Asp  
 645 650 655  
 Glu Lys Phe Ser Ala Leu Glu Glu Lys Glu Lys Glu Leu Arg Gln Leu  
 660 665 670

Arg	Leu	Ala	Val	Arg	Glu	Arg	Asp	His	Asp	Leu	Glu	Arg	Leu	Arg	Asp
675				680				685							
Val	Leu	Ser	Ser	Asn	Glu	Ala	Thr	Met	Gln	Ser	Met	Glu	Ser	Leu	Leu
690				695				700							
Arg	Ala	Lys	Gly	Leu	Glu	Val	Glu	Gln	Leu	Ser	Thr	Thr	Cys	Gln	Asn
705				710				715				720			
Leu	Gln	Trp	Leu	Lys	Glu	Glu	Met	Lys	Phe	Ser	Arg	Trp	Gln	Lys	Glu
				725				730				735			
Gln	Glu	Ser	Ile	Ile	Gln	Gln	Leu	Gln	Thr	Ser	Leu	His	Asp	Arg	Asn
				740				745				750			
Lys	Glu	Val	Glu	Asp	Leu	Ser	Ala	Thr	Leu	Leu	Cys	Lys	Leu	Gly	Pro
				755				760				765			
Gly	Gln	Ser	Glu	Ile	Ala	Glu	Glu	Leu	Cys	Gln	Arg	Leu	Gln	Arg	Lys
				770				775				780			
Glu	Arg	Met	Leu	Gln	Asp	Leu	Leu	Ser	Asp	Arg	Asn	Lys	Gln	Val	Leu
				785				790				795			
Glu	His	Glu	Met	Glu	Ile	Gln	Gly	Leu	Leu	Gln	Ser	Val	Ser	Thr	Arg
				805				810				815			
Glu	Gln	Glu	Ser	Gln	Ala	Ala	Ala	Glu	Lys	Leu	Val	Gln	Ala	Leu	Met
				820				825				830			
Glu	Arg	Asn	Ser	Glu	Leu	Gln	Ala	Leu	Arg	Gln	Tyr	Leu	Gly	Gly	Arg
				835				840				845			
Asp	Ser	Leu	Met	Ser	Gln	Ala	Pro	Ile	Ser	Asn	Gln	Gln	Ala	Glu	Val
				850				855				860			
Thr	Pro	Thr	Gly	Arg	Leu	Gly	Lys	Gln	Thr	Asp	Gln	Gly	Ser	Met	Gln
				865				870				875			
Ile	Pro	Ser	Arg	Asp	Asp	Ser	Thr	Ser	Leu	Thr	Ala	Lys	Glu	Asp	Val
				885				890				895			
Ser	Ile	Pro	Arg	Ser	Thr	Leu	Gly	Asp	Leu	Asp	Thr	Val	Ala	Gly	Leu
				900				905				910			
Glu	Lys	Glu	Leu	Ser	Asn	Ala	Lys	Glu	Glu	Leu	Glu	Leu	Met	Ala	Lys
				915				920				925			
Lys	Glu	Arg	Glu	Ser	Gln	Met	Glu	Leu	Ser	Ala	Leu	Gln	Ser	Met	Met
				930				935				940			
Ala	Val	Gln	Glu	Glu	Glu	Leu	Gln	Val	Gln	Ala	Ala	Asp	Met	Glu	Ser
				945				950				955			
Leu	Thr	Arg	Asn	Ile	Gln	Ile	Lys	Glu	Asp	Leu	Ile	Lys	Asp	Leu	Gln
				965				970				975			
Met	Gln	Leu	Val	Asp	Pro	Glu	Asp	Ile	Pro	Ala	Met	Glu	Arg	Leu	Thr
				980				985				990			

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Gln Glu Val Leu Leu Leu Arg Glu Lys Val Ala Ser Val Glu Ser Gln  
 995 1000 1005

Gly Gln Glu Ile Ser Gly Asn Arg Arg Gln Gln Leu Leu Leu Met  
 1010 1015 1020

Leu Glu Gly Leu Val Asp Glu Arg Ser Arg Leu Asn Glu Ala Leu  
 1025 1030 1035

Gln Ala Glu Arg Gln Leu Tyr Ser Ser Leu Val Lys Phe His Ala  
 1040 1045 1050

His Pro Glu Ser Ser Glu Arg Asp Arg Thr Leu Gln Val Glu Leu  
 1055 1060 1065

Glu Gly Ala Gln Val Leu Arg Ser Arg Leu Glu Glu Val Leu Gly  
 1070 1075 1080

Arg Ser Leu Glu Arg Leu Asn Arg Leu Glu Thr Leu Ala Ala Ile  
 1085 1090 1095

Gly Gly Ala Ala Ala Gly Asp Asp Thr Glu Asp Thr Ser Thr Glu  
 1100 1105 1110

Phe Thr Asp Ser Ile Glu Glu Glu Ala Ala His His Ser His Gln  
 1115 1120 1125

Gln Leu  
 1130

<210> 68  
 <211> 621  
 <212> PRT  
 <213> homo, sapiens

<400> 68

Met Ala Asp Phe Glu Glu Leu Arg Asn Met Val Ser Ser Phe Arg Val  
 1 5 10 15

Ser Glu Leu Gln Val Leu Leu Gly Phe Ala Gly Arg Asn Lys Ser Gly  
 20 25 30

Arg Lys His Asp Leu Leu Met Arg Ala Leu His Leu Leu Lys Ser Gly  
 35 40 45

Cys Ser Pro Ala Val Gln Ile Lys Ile Arg Glu Leu Tyr Arg Arg Arg  
 50 55 60

Tyr Pro Arg Thr Leu Glu Gly Leu Ser Asp Leu Ser Thr Ile Lys Ser  
 65 70 75 80

Ser Val Phe Ser Leu Asp Gly Gly Ser Ser Pro Val Glu Pro Asp Leu  
 85 90 95

Ala Val Ala Gly Ile His Ser Leu Pro Ser Thr Ser Val Thr Pro His  
 100 105 110

Ser Pro Ser Ser Pro Val Gly Ser Val Leu Leu Gln Asp Thr Lys Pro  
 115 120 125



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Val Leu Ser Lys Pro Cys Ser Val Thr Val Ala Ser Glu Ala Ser Lys  
 450 455 460  
 Lys Lys Val Asp Val Ile Asp Leu Thr Ile Glu Ser Ser Ser Asp Glu  
 465 470 475 480  
 Glu Glu Asp Pro Pro Ala Lys Arg Lys Cys Ile Phe Met Ser Glu Thr  
 485 490 495  
 Gln Ser Ser Pro Thr Lys Gly Val Leu Met Tyr Gln Pro Ser Ser Val  
 500 505 510  
 Arg Val Pro Ser Val Thr Ser Val Asp Pro Ala Ala Ile Pro Pro Ser  
 515 520 525  
 Leu Thr Asp Tyr Ser Val Pro Phe His His Thr Pro Ile Ser Ser Met  
 530 535 540  
 Ser Ser Asp Leu Pro Gly Leu Asp Phe Leu Ser Leu Ile Pro Val Asp  
 545 550 555 560  
 Pro Gln Tyr Cys Pro Pro Met Phe Leu Asp Ser Leu Thr Ser Pro Leu  
 565 570 575  
 Thr Ala Ser Ser Thr Ser Val Thr Thr Thr Ser Ser His Glu Ser Ser  
 580 585 590  
 Thr His Val Ser Ser Ser Ser Ser Arg Ser Glu Thr Gly Val Ile Thr  
 595 600 605  
 Ser Ser Gly Ser Asn Ile Pro Glu Ile Ile Ser Leu Asp  
 610 615 620  
 <210> 69  
 <211> 685  
 <212> PRT  
 <213> homo sapiens  
 <400> 69  
 Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys  
 1 5 10 15  
 Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asp Ser Lys Lys  
 20 25 30  
 Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln  
 35 40 45  
 Ala Gln Val Pro Pro Ala Ala Pro His His His His His His Ser His  
 50 55 60  
 Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys  
 65 70 75 80  
 Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys  
 85 90 95  
 Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile

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100					105					110					
Ile	Pro	His	Ser	Arg	Val	Ala	Lys	Pro	His	Gln	Arg	Glu	Lys	Ile	Asp
		115					120					125			
Lys	Glu	Ile	Glu	Leu	His	Arg	Ile	Leu	His	His	Lys	His	Val	Val	Gln
	130					135					140				
Phe	Tyr	His	Tyr	Phe	Glu	Asp	Lys	Glu	Asn	Ile	Tyr	Ile	Leu	Leu	Glu
145					150					155					160
Tyr	Cys	Ser	Arg	Arg	Ser	Met	Ala	His	Ile	Leu	Lys	Ala	Arg	Lys	Val
				165					170					175	
Leu	Thr	Glu	Pro	Glu	Val	Arg	Tyr	Tyr	Leu	Arg	Gln	Ile	Val	Ser	Gly
		180						185					190		
Leu	Lys	Tyr	Leu	His	Glu	Gln	Glu	Ile	Leu	His	Arg	Asp	Leu	Lys	Leu
	195						200					205			
Gly	Asn	Phe	Phe	Ile	Asn	Glu	Ala	Met	Glu	Leu	Lys	Val	Gly	Asp	Phe
	210					215					220				
Gly	Leu	Ala	Ala	Arg	Leu	Glu	Pro	Leu	Glu	His	Arg	Arg	Arg	Thr	Ile
225					230					235					240
Cys	Gly	Thr	Pro	Asn	Tyr	Leu	Ser	Pro	Glu	Val	Leu	Asn	Lys	Gln	Gly
				245					250					255	
His	Gly	Cys	Glu	Ser	Asp	Ile	Trp	Ala	Leu	Gly	Cys	Val	Met	Tyr	Thr
		260						265					270		
Met	Leu	Leu	Gly	Arg	Pro	Pro	Phe	Glu	Thr	Thr	Asn	Leu	Lys	Glu	Thr
	275						280					285			
Tyr	Arg	Cys	Ile	Arg	Glu	Ala	Arg	Tyr	Thr	Met	Pro	Ser	Ser	Leu	Leu
	290					295					300				
Ala	Pro	Ala	Lys	His	Leu	Ile	Ala	Ser	Met	Leu	Ser	Lys	Asn	Pro	Glu
305					310					315					320
Asp	Arg	Pro	Ser	Leu	Asp	Asp	Ile	Ile	Arg	His	Asp	Phe	Phe	Leu	Gln
				325					330					335	
Gly	Phe	Thr	Pro	Asp	Arg	Leu	Ser	Ser	Ser	Cys	Cys	His	Thr	Val	Pro
			340					345					350		
Asp	Phe	His	Leu	Ser	Ser	Pro	Ala	Lys	Asn	Phe	Phe	Lys	Lys	Ala	Ala
	355						360					365			
Ala	Ala	Leu	Phe	Gly	Gly	Lys	Lys	Asp	Lys	Ala	Arg	Tyr	Ile	Asp	Thr
	370					375					380				
His	Asn	Arg	Val	Ser	Lys	Glu	Asp	Glu	Asp	Ile	Tyr	Lys	Leu	Arg	His
385					390					395					400
Asp	Leu	Lys	Lys	Thr	Ser	Ile	Thr	Gln	Gln	Pro	Ser	Lys	His	Arg	Thr
				405					410					415	
Asp	Glu	Glu	Leu	Gln	Pro	Pro	Thr	Thr	Thr	Val	Ala	Arg	Ser	Gly	Thr



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420					425					430						
Pro	Ala	Val	Glu	Asn	Lys	Gln	Gln	Ile	Gly	Asp	Ala	Ile	Arg	Met	Ile	
435					440					445						
Val	Arg	Gly	Thr	Leu	Gly	Ser	Cys	Ser	Ser	Ser	Ser	Glu	Cys	Leu	Glu	
450					455					460						
Asp	Ser	Thr	Met	Gly	Ser	Val	Ala	Asp	Thr	Val	Ala	Arg	Val	Leu	Arg	
465					470					475					480	
Gly	Cys	Leu	Glu	Asn	Met	Pro	Glu	Ala	Asp	Cys	Ile	Pro	Lys	Glu	Gln	
485					490					495						
Leu	Ser	Thr	Ser	Phe	Gln	Trp	Val	Thr	Lys	Trp	Val	Asp	Tyr	Ser	Asn	
500					505					510						
Lys	Tyr	Gly	Phe	Gly	Tyr	Gln	Leu	Ser	Asp	His	Thr	Val	Gly	Val	Leu	
515					520					525						
Phe	Asn	Asn	Gly	Ala	His	Met	Ser	Leu	Leu	Pro	Asp	Lys	Lys	Thr	Val	
530					535					540						
His	Tyr	Tyr	Ala	Glu	Leu	Gly	Gln	Cys	Ser	Val	Phe	Pro	Ala	Thr	Asp	
545					550					555					560	
Ala	Pro	Glu	Gln	Phe	Ile	Ser	Gln	Val	Thr	Val	Leu	Lys	Tyr	Phe	Ser	
565					570					575						
His	Tyr	Met	Glu	Glu	Asn	Leu	Met	Asp	Gly	Gly	Asp	Leu	Pro	Ser	Val	
580					585					590						
Thr	Asp	Ile	Arg	Arg	Pro	Arg	Leu	Tyr	Leu	Leu	Gln	Trp	Leu	Lys	Ser	
595					600					605						
Asp	Lys	Ala	Leu	Met	Met	Leu	Phe	Asn	Asp	Gly	Thr	Phe	Gln	Val	Asn	
610					615					620						
Phe	Tyr	His	Asp	His	Thr	Lys	Ile	Ile	Ile	Cys	Ser	Gln	Asn	Glu	Glu	
625					630					635					640	
Tyr	Leu	Leu	Thr	Tyr	Ile	Asn	Glu	Asp	Arg	Ile	Ser	Thr	Thr	Phe	Arg	
645					650					655						
Leu	Thr	Thr	Leu	Leu	Met	Ser	Gly	Cys	Ser	Ser	Glu	Leu	Lys	Asn	Arg	
660					665					670						
Met	Glu	Tyr	Ala	Leu	Asn	Met	Leu	Leu	Gln	Arg	Cys	Asn				
675					680					685						
<210> 70																
<211> 767																
<212> PRT																
<213> homo sapiens																
<400> 70																
Met	Ala	Thr	Tyr	Leu	Glu	Phe	Ile	Gln	Gln	Asn	Glu	Glu	Arg	Asp	Gly	
1					5					10					15	

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Val Arg Phe Ser Trp Asn Val Trp Pro Ser Ser Arg Leu Glu Ala Thr  
 20 25 30  
 Arg Met Val Val Pro Leu Ala Cys Leu Leu Thr Pro Leu Lys Glu Arg  
 35 40 45  
 Pro Asp Leu Pro Pro Val Gln Tyr Glu Pro Val Leu Cys Ser Arg Pro  
 50 55 60  
 Thr Cys Lys Ala Val Leu Asn Pro Leu Cys Gln Val Asp Tyr Arg Ala  
 65 70 75 80  
 Lys Leu Trp Ala Cys Asn Phe Cys Phe Gln Arg Asn Gln Phe Pro Pro  
 85 90 95  
 Ala Tyr Gly Gly Ile Ser Glu Val Asn Gln Pro Ala Glu Leu Met Pro  
 100 105 110  
 Gln Phe Ser Thr Ile Glu Tyr Val Ile Gln Arg Gly Ala Gln Ser Pro  
 115 120 125  
 Leu Ile Phe Leu Tyr Val Val Asp Thr Cys Leu Glu Glu Asp Asp Leu  
 130 135 140  
 Gln Ala Leu Lys Glu Ser Leu Gln Met Ser Leu Ser Leu Leu Pro Pro  
 145 150 155 160  
 Asp Ala Leu Val Gly Leu Ile Thr Phe Gly Arg Met Val Gln Val His  
 165 170 175  
 Glu Leu Ser Cys Glu Gly Ile Ser Lys Ser Tyr Val Phe Arg Gly Thr  
 180 185 190  
 Lys Asp Leu Thr Ala Lys Gln Ile Gln Asp Met Leu Gly Leu Thr Lys  
 195 200 205  
 Pro Ala Met Pro Met Gln Gln Ala Arg Pro Ala Gln Pro Gln Glu His  
 210 215 220  
 Pro Phe Ala Ser Ser Arg Phe Leu Gln Pro Val His Lys Ile Asp Met  
 225 230 235 240  
 Asn Leu Thr Asp Leu Leu Gly Glu Leu Gln Arg Asp Pro Trp Pro Val  
 245 250 255  
 Thr Gln Gly Lys Arg Pro Leu Arg Ser Thr Gly Val Ala Leu Ser Ile  
 260 265 270  
 Ala Val Gly Leu Leu Glu Gly Thr Phe Pro Asn Thr Gly Ala Arg Ile  
 275 280 285  
 Met Leu Phe Thr Gly Gly Pro Pro Thr Gln Gly Pro Gly Met Val Val  
 290 295 300  
 Gly Asp Glu Leu Lys Ile Pro Ile Arg Ser Trp His Asp Ile Glu Lys  
 305 310 315 320  
 Asp Asn Ala Arg Phe Met Lys Lys Ala Thr Lys His Tyr Glu Met Leu  
 325 330 335

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Ala Asn Arg Thr Ala Ala Asn Gly His Cys Ile Asp Ile Tyr Ala Cys  
 340 345 350  
 Ala Leu Asp Gln Thr Gly Leu Leu Glu Met Lys Cys Cys Ala Asn Leu  
 355 360 365  
 Thr Gly Gly Tyr Met Val Met Gly Asp Ser Phe Asn Thr Ser Leu Phe  
 370 375 380  
 Lys Gln Thr Phe Gln Arg Ile Phe Thr Lys Asp Phe Asn Gly Asp Phe  
 385 390 395 400  
 Arg Met Ala Phe Gly Ala Thr Leu Asp Val Lys Thr Ser Arg Glu Leu  
 405 410 415  
 Lys Ile Ala Gly Ala Ile Gly Pro Cys Val Ser Leu Asn Val Lys Gly  
 420 425 430  
 Pro Cys Val Ser Glu Asn Glu Leu Gly Val Gly Gly Thr Ser Gln Trp  
 435 440 445  
 Lys Ile Cys Gly Leu Asp Pro Thr Ser Thr Leu Gly Ile Tyr Phe Glu  
 450 455 460  
 Val Val Asn Gln His Asn Thr Pro Ile Pro Gln Gly Gly Arg Gly Ala  
 465 470 475 480  
 Ile Gln Phe Val Thr His Tyr Gln His Ser Ser Thr Gln Arg Arg Ile  
 485 490 495  
 Arg Val Thr Thr Ile Ala Arg Asn Trp Ala Asp Val Gln Ser Gln Leu  
 500 505 510  
 Arg His Ile Glu Ala Ala Phe Asp Gln Glu Ala Ala Val Leu Met  
 515 520 525  
 Ala Arg Leu Gly Val Phe Arg Ala Glu Ser Glu Glu Gly Pro Asp Val  
 530 535 540  
 Leu Arg Trp Leu Asp Arg Gln Leu Ile Arg Leu Cys Gln Lys Phe Gly  
 545 550 555 560  
 Gln Tyr Asn Lys Glu Asp Pro Thr Ser Phe Arg Leu Ser Asp Ser Phe  
 565 570 575  
 Ser Leu Tyr Pro Gln Phe Met Phe His Leu Arg Arg Ser Pro Phe Leu  
 580 585 590  
 Gln Val Phe Asn Asn Ser Pro Asp Glu Ser Ser Tyr Tyr Arg His His  
 595 600 605  
 Phe Ala Arg Gln Asp Leu Thr Gln Ser Leu Ile Met Ile Gln Pro Ile  
 610 615 620  
 Leu Tyr Ser Tyr Ser Phe His Gly Pro Pro Glu Pro Val Leu Leu Asp  
 625 630 635 640  
 Ser Ser Ser Ile Leu Ala Asp Arg Ile Leu Leu Met Asp Thr Phe Phe  
 645 650 655

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Gln Ile Val Ile Tyr Leu Gly Glu Thr Ile Ala Gln Trp Arg Lys Ala  
660 665 670

Gly Tyr Gln Asp Met Pro Glu Tyr Glu Asn Phe Lys His Leu Leu Gln  
675 680 685

Ala Pro Leu Asp Asp Ala Gln Glu Ile Leu Gln Ala Arg Phe Pro Met  
690 695 700

Pro Arg Tyr Ile Asn Thr Glu His Gly Gly Ser Gln Ala Arg Phe Leu  
705 710 715 720

Leu Ser Lys Val Asn Pro Ser Gln Thr His Asn Asn Leu Tyr Ala Trp  
725 730 735

Gly Gln Glu Thr Gly Ala Pro Ile Leu Thr Asp Asp Val Ser Leu Gln  
740 745 750

Val Phe Met Asp His Leu Lys Lys Leu Ala Val Ser Ser Ala Cys  
755 760 765

<210> 71  
<211> 188  
<212> PRT  
<213> homo sapiens

<400> 71

Met Asn Gly Asp Asp Thr Phe Ala Lys Arg Pro Arg Asp Asp Ala Lys  
1 5 10 15

Ala Ser Glu Lys Arg Ser Lys Ala Phe Asp Asp Ile Ala Thr Tyr Phe  
20 25 30

Ser Lys Lys Glu Trp Lys Lys Met Lys Tyr Ser Glu Lys Ile Ser Tyr  
35 40 45

Val Tyr Met Lys Arg Asn Tyr Lys Ala Met Thr Lys Leu Gly Phe Lys  
50 55 60

Val Thr Leu Pro Pro Phe Met Cys Asn Lys Gln Ala Thr Asp Phe Gln  
65 70 75 80

Gly Asn Asp Phe Asp Asn Asp His Asn Arg Arg Ile Gln Val Glu His  
85 90 95

Pro Gln Met Thr Phe Gly Arg Leu His Arg Ile Ile Pro Lys Ile Met  
100 105 110

Pro Lys Lys Pro Ala Glu Asp Glu Asn Asp Ser Lys Gly Val Ser Glu  
115 120 125

Ala Ser Gly Pro Gln Asn Asp Gly Lys Gln Leu His Pro Pro Gly Lys  
130 135 140

Ala Asn Ile Ser Glu Lys Ile Asn Lys Arg Ser Gly Pro Lys Arg Gly  
145 150 155 160

Lys His Ala Trp Thr His Arg Leu Arg Glu Arg Lys Gln Leu Val Ile  
165 170 175

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Tyr Glu Glu Ile Ser Asp Pro Glu Glu Asp Asp Glu  
 180 185

<210> 72  
 <211> 1038  
 <212> PRT  
 <213> homo sapiens  
 <220>  
 <221> MISC\_FEATURE  
 <222> (910)..(910)  
 <223> Xaa = any amino acid

<400> 72

Met Trp Arg Cys Gly Gly Arg Gln Gly Leu Cys Val Leu Arg Arg Leu  
 1 5 10 15  
 Ser Gly Gly His Ala His His Arg Ala Trp Arg Trp Asn Ser Asn Arg  
 20 25 30  
 Ala Cys Glu Arg Ala Leu Gln Tyr Lys Leu Gly Asp Lys Ile His Gly  
 35 40 45  
 Phe Thr Val Asn Gln Val Thr Ser Val Pro Glu Leu Phe Leu Thr Ala  
 50 55 60  
 Val Lys Leu Thr His Asp Asp Thr Gly Ala Arg Tyr Leu His Leu Ala  
 65 70 75 80  
 Arg, Glu Asp Thr Asn Asn Leu Phe Ser Val Gln Phe Arg Thr Thr Pro  
 85 90 95  
 Met Asp Ser Thr Gly Val Pro His Ile Leu Glu His Thr Val Leu Cys  
 100 105 110  
 Gly Ser Gln Lys Tyr Pro Cys Arg Asn Pro Phe Phe Lys Met Leu Asn  
 115 120 125  
 Arg Ser Leu Ser Thr Phe Met Asn Ala Phe Thr Ala Ser Asp Tyr Thr  
 130 135 140  
 Leu Tyr Pro Phe Ser Thr Gln Asn Pro Lys Asp Phe Gln Asn Leu Leu  
 145 150 155 160  
 Ser Val Tyr Leu Asp Ala Thr Phe Ser Pro Cys Leu Arg Glu Leu Asp  
 165 170 175  
 Phe Trp Gln Glu Gly Trp Arg Leu Glu His Glu Asn Pro Ser Asp Pro  
 180 185 190  
 Gln Thr Pro Leu Val Phe Lys Gly Val Val Phe Asn Glu Met Lys Gly  
 195 200 205  
 Ala Phe Thr Asp Asn Glu Arg Ile Phe Ser Gln His Leu Gln Asn Arg  
 210 215 220  
 Leu Leu Pro Asp His Thr Tyr Ser Val Val Ser Gly Gly Asp Pro Leu  
 225 230 235 240

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Cys Ile Pro Glu Leu Thr Trp Glu Gln Leu Lys Gln Phe His Ala Thr  
 245 250 255  
 His Tyr His Pro Ser Asn Ala Arg Phe Phe Thr Tyr Gly Asn Phe Pro  
 260 265 270  
 Leu Glu Gln His Leu Lys Gln Ile His Glu Glu Ala Leu Ser Lys Phe  
 275 280 285  
 Gln Lys Ile Glu Pro Ser Thr Val Val Pro Ala Gln Thr Pro Trp Asp  
 290 295 300  
 Lys Pro Arg Glu Phe Gln Ile Thr Cys Gly Pro Asp Ser Phe Ala Thr  
 305 310 315 320  
 Asp Pro Ser Lys Gln Thr Thr Val Ser Val Ser Phe Leu Leu Pro Asp  
 325 330 335  
 Ile Thr Asp Thr Phe Glu Ala Phe Thr Leu Ser Leu Leu Ser Ser Leu  
 340 345 350  
 Leu Thr Ser Gly Pro Asn Ser Pro Phe Tyr Lys Ala Leu Ile Glu Ser  
 355 360 365  
 Gly Leu Gly Thr Glu Phe Ser Pro Asp Val Gly Tyr Asn Gly Tyr Thr  
 370 375 380  
 Arg Glu Ala Tyr Phe Ser Val Gly Leu Gln Gly Ile Val Glu Lys Asp  
 385 390 395 400  
 Ile Glu Thr Val Arg Ser Leu Ile Asp Arg Thr Ile Asp Glu Val Val  
 405 410 415  
 Glu Thr Arg Ile Glu Asp Asp Arg Ile Glu Ala Leu Leu His Lys Ile  
 420 425 430  
 Glu Ile Gln Met Lys His Gln Ser Thr Ser Phe Gly Leu Met Leu Thr  
 435 440 445  
 Ser Tyr Ile Ala Ser Cys Trp Asn His Asp Gly Asp Pro Val Glu Leu  
 450 455 460  
 Leu Lys Leu Gly Asn Gln Leu Ala Lys Phe Arg Gln Cys Leu Gln Glu  
 465 470 475 480  
 Asn Pro Lys Phe Leu Gln Glu Lys Val Lys Gln Tyr Phe Lys Asn Asn  
 485 490 495  
 Gln His Lys Leu Thr Leu Ser Met Arg Pro Asp Asp Lys Tyr His Glu  
 500 505 510  
 Lys Gln Ala Gln Val Glu Ala Thr Lys Leu Lys Gln Lys Val Glu Ala  
 515 520 525  
 Leu Ser Pro Gly Asp Arg Gln Gln Ile Tyr Glu Lys Gly Leu Glu Leu  
 530 535 540  
 Arg Ser Gln Gln Ser Lys Pro Gln Asp Ala Ser Cys Leu Pro Ala Leu  
 545 550 555 560

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Lys Val Ser Asp Ile Glu Pro Thr Ile Pro Val Thr Glu Leu Asp Val  
 565 570 575  
 Val Leu Thr Ala Gly Asp Ile Pro Val Gln Tyr Cys Ala Gln Pro Thr  
 580 585 590  
 Asn Gly Met Val Tyr Phe Arg Ala Phe Ser Ser Leu Asn Thr Leu Pro  
 595 600 605  
 Glu Glu Leu Arg Pro Tyr Val Pro Leu Phe Cys Ser Ile Leu Thr Lys  
 610 615 620  
 Leu Gly Cys Gly Leu Leu Asp Tyr Arg Glu Gln Ala Gln Gln Ile Glu  
 625 630 635 640  
 Leu Lys Thr Gly Gly Met Ser Ala Ser Pro His Val Leu Pro Asp Asp  
 645 650 655  
 Ser His Met Asp Thr Tyr Glu Gln Val Gly Val Leu Phe Ser Ser Leu  
 660 665 670  
 Cys Leu Asp Arg Asn Leu Pro Asp Met Met Gln Leu Trp Ser Glu Ile  
 675 680 685  
 Phe Asn Asn Pro Cys Phe Glu Glu Glu Glu His Phe Lys Val Leu Val  
 690 695 700  
 Lys Met Thr Ala Gln Glu Leu Ala Asn Gly Ile Pro Asp Ser Gly His  
 705 710 715 720  
 Leu Tyr Ala Ser Ile Arg Ala Gly Arg Thr Leu Thr Pro Ala Gly Asp  
 725 730 735  
 Leu Gln Glu Thr Phe Ser Gly Met Asp Gln Val Arg Leu Met Lys Arg  
 740 745 750  
 Ile Ala Glu Met Thr Asp Ile Lys Pro Ile Leu Arg Lys Leu Pro Arg  
 755 760 765  
 Ile Lys Lys His Leu Leu Asn Gly Asp Asn Met Arg Cys Ser Val Asn  
 770 775 780  
 Ala Thr Pro Gln Gln Met Pro Gln Thr Glu Lys Ala Val Glu Asp Phe  
 785 790 795 800  
 Leu Arg Ser Ile Gly Arg Ser Lys Lys Glu Arg Arg Pro Val Arg Pro  
 805 810 815  
 His Thr Val Glu Lys Pro Val Pro Ser Ser Ser Gly Gly Asp Ala His  
 820 825 830  
 Val Pro His Gly Ser Gln Val Ile Arg Lys Leu Val Met Glu Pro Thr  
 835 840 845  
 Phe Lys Pro Trp Gln Met Lys Thr His Phe Leu Met Pro Phe Pro Val  
 850 855 860  
 Asn Tyr Val Gly Glu Cys Ile Arg Thr Val Pro Tyr Thr Asp Pro Asp  
 865 870 875 880





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115	120	125
Ala Arg Ala Ser Gly Ala Gly Ala Gly Ala Gly Gly Ala Glu Asp Ala		
130	135	140
Gly Ala Ala Ala Ala Ala Pro Gly Arg Ala Pro Gly Ala His Arg Gln		
145	150	155
Leu Arg Leu Thr Ala Gly Ala Gly His Gly Arg Asn Ala His Ala Gly		
	165	170
His Ser Gly Leu Leu His Gly Pro Ala Ser Arg Ser His Arg Ala Arg		
	180	185
Pro Arg Pro Ala Arg Glu Ala His Arg Pro His Gln Gly Asn Pro Gly		
	195	200
Pro Gly Arg Gln Arg Ala Pro Val Arg Ser Gly Arg Ala His Asp Ala		
	210	215
Glu Glu Lys Leu Trp Ala Arg Pro Cys His Thr Pro Pro Arg Gly Arg		
	225	230
Glu Ala Gly Gly Pro Pro Phe Gly Ala Trp Ser His Pro Ala Pro Leu		
	245	250
Gly Ala Pro Ala Pro Leu Lys Leu Asn Phe Cys Ser Ile Pro Leu Ala		
	260	265
Phe Asn Leu Pro Ser Pro Leu Asn Pro Glu Lys Ala Leu Ala Ala Arg		
	275	280
Tyr Thr Gln Lys Asn Leu Thr Ala Glu Gly Ala Pro Pro Arg Arg Thr		
	290	295
Ala Thr Arg Tyr Thr Gly Ser Pro Gly His Pro Gln Asp Thr Gly Gln		
	305	310
Thr Lys Pro Thr Pro Ser Thr Arg Gln Asp Pro Pro Asn Tyr Ser Leu		
	325	330
Arg Gly Ala Val Pro		
	340	

<210> 74  
 <211> 377  
 <212> PRT  
 <213> homo sapiens

<400> 74

Met Val Leu Glu Ser Thr Met Val Cys Val Asp Asn Ser Glu Tyr Met		
1	5	10
Arg Asn Gly Asp Phe Leu Pro Thr Arg Leu Gln Ala Gln Gln Asp Ala		
	20	30
vai Asn Ile Val Cys His Ser Lys Thr Arg Ser Asn Pro Glu Asn Asn		
	35	45

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Val Gly Leu Ile Thr Leu Ala Asn Asp Cys Glu Val Leu Thr Thr Leu  
 50 55 60  
 Thr Pro Asp Thr Gly Arg Ile Leu Ser Lys Leu His Thr Val Gln Pro  
 65 70 75 80  
 Lys Gly Lys Ile Thr Phe Cys Thr Gly Ile Arg Val Ala His Leu Ala  
 85 90 95  
 Leu Lys His Arg Gln Gly Lys Asn His Lys Met Arg Ile Ile Ala Phe  
 100 105 110  
 Val Gly Ser Pro Val Glu Asp Asn Glu Lys Asp Leu Val Lys Leu Ala  
 115 120 125  
 Lys Arg Leu Lys Lys Glu Lys Val Asn Val Asp Ile Ile Asn Phe Gly  
 130 135 140  
 Glu Glu Glu Val Asn Thr Glu Lys Leu Thr Ala Phe Val Asn Thr Leu  
 145 150 155 160  
 Asn Gly Lys Asp Gly Thr Gly Ser His Leu Val Thr Val Pro Pro Gly  
 165 170 175  
 Pro Ser Leu Ala Asp Ala Leu Ile Ser Ser Pro Ile Leu Ala Gly Glu  
 180 185 190  
 Gly Gly Ala Met Leu Gly Leu Gly Ala Ser Asp Phe Glu Phe Gly Val  
 195 200 205  
 Asp Pro Ser Ala Asp Pro Glu Leu Ala Leu Ala Leu Arg Val Ser Met  
 210 215 220  
 Glu Glu Gln Arg Gln Arg Gln Glu Glu Glu Ala Arg Arg Ala Ala Ala  
 225 230 235 240  
 Ala Ser Ala Ala Glu Ala Gly Ile Ala Thr Thr Gly Thr Glu Asp Ser  
 245 250 255  
 Asp Asp Ala Leu Leu Lys Met Thr Ile Ser Gln Gln Glu Phe Gly Arg  
 260 265 270  
 Thr Gly Leu Pro Asp Leu Ser Ser Met Thr Glu Glu Glu Gln Ile Ala  
 275 280 285  
 Tyr Ala Met Gln Met Ser Leu Gln Gly Ala Glu Phe Gly Gln Ala Glu  
 290 295 300  
 Ser Ala Asp Ile Asp Ala Ser Ser Ala Met Asp Thr Ser Glu Pro Ala  
 305 310 315 320  
 Lys Glu Glu Asp Asp Tyr Asp Val Met Gln Asp Pro Glu Phe Leu Gln  
 325 330 335  
 Ser Val Leu Glu Asn Leu Pro Gly Val Asp Pro Asn Asn Glu Ala Ile  
 340 345 350  
 Arg Asn Ala Met Gly Ser Leu Ala Ser Gln Ala Thr Lys Asp Gly Lys  
 355 360 365

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Lys Asp Lys Lys Glu Glu Asp Lys Lys  
 370 375

<210> 75  
 <211> 399  
 <212> PRT  
 <213> homo sapiens

<400> 75

Met Ser Asp Ile Leu Arg Glu Leu Leu Cys Val Ser Glu Lys Ala Ala  
 1 5 10 15  
 Asn Ile Ala Arg Ala Cys Arg Gln Gln Glu Ala Leu Phe Gln Leu Leu  
 20 25 30  
 Ile Glu Glu Lys Lys Glu Gly Glu Lys Asn Lys Lys Phe Ala Val Asp  
 35 40 45  
 Phe Lys Thr Leu Ala Asp Val Leu Val Gln Glu Val Ile Lys Gln Asn  
 50 55 60  
 Met Glu Asn Lys Phe Pro Gly Leu Glu Lys Asn Ile Phe Gly Glu Glu  
 65 70 75 80  
 Ser Asn Glu Phe Thr Asn Asp Trp Gly Glu Lys Ile Thr Leu Arg Leu  
 85 90 95  
 Cys Ser Thr Glu Glu Glu Thr Ala Glu Leu Leu Ser Lys Val Leu Asn  
 100 105 110  
 Gly Asn Lys Val Ala Ser Glu Ala Leu Ala Arg Val Val His Gln Asp  
 115 120 125  
 Val Ala Phe Thr Asp Pro Thr Leu Asp Ser Thr Glu Ile Asn Val Pro  
 130 135 140  
 Gln Asp Ile Leu Gly Ile Trp Val Asp Pro Ile Asp Ser Thr Tyr Gln  
 145 150 155 160  
 Tyr Ile Lys Gly Ser Ala Asp Ile Lys Ser Asn Gln Gly Ile Phe Pro  
 165 170 175  
 Cys Gly Leu Gln Cys Val Thr Ile Leu Ile Gly Val Tyr Asp Ile Gln  
 180 185 190  
 Thr Gly Val Pro Leu Met Gly Val Ile Asn Gln Pro Phe Val Ser Arg  
 195 200 205  
 Asp Pro Asn Thr Leu Arg Trp Lys Gly Gln Cys Tyr Trp Gly Leu Ser  
 210 215 220  
 Tyr Met Gly Thr Asn Met His Ser Leu Gln Leu Thr Ile Ser Arg Arg  
 225 230 235 240  
 Asn Gly Ser Glu Thr His Thr Gly Asn Thr Gly Ser Glu Ala Ala Phe  
 245 250 255  
 Ser Pro Ser Phe Ser Ala Val Ile Ser Thr Ser Glu Lys Glu Thr Ile  
 260 265 270

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Lys Ala Ala Leu Ser Arg Val Cys Gly Asp Arg Ile Phe Gly Ala Ala  
275 280 285

Gly Ala Gly Tyr Lys Ser Leu Cys Val Val Gln Gly Leu Val Asp Ile  
290 295 300

Tyr Ile Phe Ser Glu Asp Thr Thr Phe Lys Trp Asp Ser Cys Ala Ala  
305 310 315 320

His Ala Ile Leu Arg Ala Met Gly Gly Gly Ile Val Asp Leu Lys Glu  
325 330 335

Cys Leu Glu Arg Asn Pro Glu Thr Gly Leu Asp Leu Pro Gln Leu Val  
340 345 350

Tyr His Val Glu Asn Glu Gly Ala Ala Gly Val Asp Arg Trp Ala Asn  
355 360 365

Lys Gly Gly Leu Ile Ala Tyr Arg Ser Arg Lys Arg Leu Glu Thr Phe  
370 375 380

Leu Ser Leu Leu Val Gln Asn Leu Ala Pro Ala Glu Thr His Thr  
385 390 395

<210> 76

<211> 296

<212> PRT

<213> homo sapiens

<400> 76

Met Lys Asn Glu Ile Ala Ala Val Val Phe Phe Phe Thr Arg Leu Val  
1 5 10 15

Arg Lys His Asp Lys Leu Lys Lys Glu Ala Val Glu Arg Phe Ala Glu  
20 25 30

Lys Leu Thr Leu Ile Leu Gln Glu Lys Tyr Lys Asn His Trp Tyr Pro  
35 40 45

Glu Lys Pro Ser Lys Gly Gln Ala Tyr Arg Cys Ile Arg Val Asn Lys  
50 55 60

Phe Gln Arg Val Asp Pro Asp Val Leu Lys Ala Cys Glu Asn Ser Cys  
65 70 75 80

Ile Leu Tyr Ser Asp Leu Gly Leu Pro Lys Glu Leu Thr Leu Trp Val  
85 90 95

Asp Pro Cys Glu Val Cys Cys Arg Arg Asp Gly Val Ser Pro Cys Trp  
100 105 110

Pro Asp Cys Ser Gln Thr Pro Asp Leu Val Ile Arg Pro Pro Trp Pro  
115 120 125

Pro Lys Ala Leu Asp Tyr Arg Arg Glu Pro Leu Arg Pro Ala Ser Ser  
130 135 140

Phe Leu Ile Met Tyr Gly Glu Lys Asn Asn Ala Phe Ile Val Ala Ser

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145                      150                      155                      160  
 Phe Glu Asn Lys Asp Glu Asn Lys Asp Glu Ile Ser Arg Lys Val Thr  
                                  165                                   170                                   175  
 Arg Ala Leu Asp Lys Val Thr Ser Asp Tyr His Ser Gly Ser Ser Ser  
                                  180                                   185                                   190  
 Ser Asp Glu Glu Thr Ser Lys Glu Met Glu Val Lys Pro Ser Ser Val  
                                  195                                   200                                   205  
 Thr Ala Ala Ala Ser Pro Val Tyr Gln Ile Ser Glu Leu Ile Phe Pro  
                                  210                                   215                                   220  
 Pro Leu Pro Met Trp His Pro Leu Pro Arg Lys Lys Pro Gly Met Tyr  
                                  225                                   230                                   235                                   240  
 Arg Gly Asn Gly His Gln Asn His Tyr Pro Pro Pro Val Pro Phe Gly  
                                  245                                   250                                   255  
 Tyr Pro Asn Gln Gly Arg Lys Asn Lys Pro Tyr Arg Pro Ile Pro Val  
                                  260                                   265                                   270  
 Thr Trp Val Pro Pro Pro Gly Met His Cys Asp Arg Asn His Trp Ile  
                                  275                                   280                                   285  
 Asn Pro His Met Leu Ala Pro His  
                                  290                                   295

<210> 77  
 <211> 188  
 <212> PRT  
 <213> homo sapiens

<400> 77

Met Asn Gly Asp Asp Ala Phe Ala Arg Arg Pro Arg Asp Asp Ala Gln  
 1                                   5                                   10                                   15  
 Ile Ser Glu Lys Leu Arg Lys Ala Phe Asp Asp Ile Ala Lys Tyr Phe  
                                  20                                   25                                   30  
 Ser Lys Lys Glu Trp Glu Lys Met Lys Ser Ser Glu Lys Ile Val Tyr  
                                  35                                   40                                   45  
 Val Tyr Met Lys Leu Asn Tyr Glu Val Met Thr Lys Leu Gly Phe Lys  
                                  50                                   55                                   60  
 Val Thr Leu Pro Pro Phe Met Arg Ser Lys Arg Ala Ala Asp Phe His  
                                  65                                   70                                   75                                   80  
 Gly Asn Asp Phe Gly Asn Asp Arg Asn His Arg Asn Gln Val Glu Arg  
                                  85                                   90                                   95  
 Pro Gln Met Thr Phe Gly Ser Leu Gln Arg Ile Phe Pro Lys Ile Met  
                                  100                                   105                                   110  
 Pro Lys Lys Pro Ala Glu Glu Glu Asn Gly Leu Lys Glu Val Pro Glu  
                                  115                                   120                                   125

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Ala Ser Gly Pro Gln Asn Asp Gly Lys Gln Leu Cys Pro Pro Gly Asn  
 130 135 140

Pro Ser Thr Leu Glu Lys Ile Asn Lys Thr Ser Gly Pro Lys Arg Gly  
 145 150 155 160

Lys His Ala Trp Thr His Arg Leu Arg Glu Arg Lys Gln Leu Val Val  
 165 170 175

Tyr Glu Glu Ile Ser Asp Pro Glu Glu Asp Asp Glu  
 180 185

<210> 78  
 <211> 602  
 <212> PRT  
 <213> homo sapiens

<400> 78

Met Ala Ala Glu Glu Glu Ala Ala Ala Gly Gly Lys Val Leu Arg Glu  
 1 5 10 15

Glu Asn Gln Cys Ile Ala Pro Val Val Ser Ser Arg Val Ser Pro Gly  
 20 25 30

Thr Arg Pro Thr Ala Met Gly Ser Phe Ser Ser His Met Thr Glu Phe  
 35 40 45

Pro Arg Lys Arg Lys Gly Ser Asp Ser Asp Pro Ser Gln Val Glu Asp  
 50 55 60

Gly Glu His Gln Val Lys Met Lys Ala Phe Arg Glu Ala His Ser Gln  
 65 70 75 80

Thr Glu Lys Arg Arg Arg Asp Lys Met Asn Asn Leu Ile Glu Glu Leu  
 85 90 95

Ser Ala Met Ile Pro Gln Cys Asn Pro Met Ala Arg Lys Leu Asp Lys  
 100 105 110

Leu Thr Val Leu Arg Met Ala Val Gln His Leu Arg Ser Leu Lys Gly  
 115 120 125

Leu Thr Asn Ser Tyr Val Gly Ser Asn Tyr Arg Pro Ser Phe Leu Gln  
 130 135 140

Asp Asn Glu Leu Arg His Leu Ile Leu Lys Thr Ala Glu Gly Phe Leu  
 145 150 155 160

Phe Val Val Gly Cys Glu Arg Gly Lys Ile Leu Phe Val Ser Lys Ser  
 165 170 175

Val Ser Lys Ile Leu Asn Tyr Asp Gln Ala Ser Leu Thr Gly Gln Ser  
 180 185 190

Leu Phe Asp Phe Leu His Pro Lys Asp Val Ala Lys Val Lys Glu Gln  
 195 200 205

Leu Ser Ser Phe Asp Ile Ser Pro Arg Glu Lys Leu Ile Asp Ala Lys  
 210 215 220

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Thr Gly Leu Gln Val His Ser Asn Leu His Ala Gly Arg Thr Arg Val  
 225 230 235 240  
 Tyr Ser Gly Ser Arg Arg Ser Phe Phe Cys Arg Ile Lys Ser Cys Lys  
 245 250 255  
 Ile Ser Val Lys Glu Glu His Gly Cys Leu Pro Asn Ser Lys Lys Lys  
 260 265 270  
 Glu His Arg Lys Phe Tyr Thr Ile His Cys Thr Gly Tyr Leu Arg Ser  
 275 280 285  
 Trp Pro Pro Asn Ile Val Gly Met Glu Glu Glu Arg Asn Ser Lys Lys  
 290 295 300  
 Asp Asn Ser Asn Phe Thr Cys Leu Val Ala Ile Gly Arg Leu Gln Pro  
 305 310 315 320  
 Tyr Ile Val Pro Gln Asn Ser Gly Glu Ile Asn Val Lys Pro Thr Glu  
 325 330 335  
 Phe Ile Thr Arg Phe Ala Val Asn Gly Lys Phe Val Tyr Val Asp Gln  
 340 345 350  
 Arg Ala Thr Ala Ile Leu Gly Tyr Leu Pro Gln Glu Leu Leu Gly Thr  
 355 360 365  
 Ser Cys Tyr Glu Tyr Phe His Gln Asp Asp His Asn Asn Leu Thr Asp  
 370 375 380  
 Lys His Lys Ala Val Leu Gln Ser Lys Glu Lys Ile Leu Thr Asp Ser  
 385 390 395 400  
 Tyr Lys Phe Arg Ala Lys Asp Gly Ser Phe Val Thr Leu Lys Ser Gln  
 405 410 415  
 Trp Phe Ser Phe Thr Asn Pro Trp Thr Lys Glu Leu Glu Tyr Ile Val  
 420 425 430  
 Ser Val Asn Thr Leu Val Leu Gly His Ser Glu Pro Gly Glu Ala Ser  
 435 440 445  
 Phe Leu Pro Cys Ser Ser Gln Ser Ser Glu Glu Ser Ser Arg Gln Ser  
 450 455 460  
 Cys Met Ser Val Pro Gly Met Ser Thr Gly Thr Val Leu Gly Ala Gly  
 465 470 475 480  
 Ser Ile Gly Thr Asp Ile Ala Asn Glu Ile Leu Asp Leu Gln Arg Leu  
 485 490 495  
 Gln Ser Ser Ser Tyr Leu Asp Asp Ser Ser Pro Thr Gly Leu Met Lys  
 500 505 510  
 Asp Thr His Thr Val Asn Cys Arg Ser Met Ser Asn Lys Glu Leu Phe  
 515 520 525  
 Pro Pro Ser Pro Ser Glu Met Gly Glu Leu Glu Ala Thr Arg Gln Asn  
 530 535 540

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Gln Ser Thr Val Ala Val His Ser His Glu Pro Leu Leu Ser Asp Gly  
545 550 555 560

Ala Gln Leu Asp Phe Asp Ala Leu Cys Asp Asn Asp Asp Thr Ala Met  
565 570 575

Ala Ala Phe Met Asn Tyr Leu Glu Ala Glu Gly Gly Leu Gly Asp Pro  
580 585 590

Gly Asp Phe Ser Asp Ile Gln Trp Thr Leu  
595 600

<210> 79

<211> 745

<212> PRT

<213> homo sapiens

<400> 79

Met Ile Arg Gly Arg Asn Ser Ala Thr Ser Ala Asp Glu Gln Pro His  
1 5 10 15

Ile Gly Asn Tyr Arg Leu Leu Lys Thr Ile Gly Lys Gly Asn Phe Ala  
20 25 30

Lys Val Lys Leu Ala Arg His Ile Leu Thr Gly Lys Glu Val Ala Val  
35 40 45

Lys Ile Ile Asp Lys Thr Gln Leu Asn Ser Ser Ser Leu Gln Lys Leu  
50 55 60

Phe Arg Glu Val Arg Ile Met Lys Val Leu Asn His Pro Asn Ile Val  
65 70 75 80

Lys Leu Phe Glu Val Ile Glu Thr Glu Lys Thr Leu Tyr Leu Val Met  
85 90 95

Glu Tyr Ala Ser Gly Gly Glu Val Phe Asp Tyr Leu Val Ala His Gly  
100 105 110

Arg Met Lys Glu Lys Glu Ala Arg Ala Lys Phe Arg Gln Ile Val Ser  
115 120 125

Ala Val Gln Tyr Cys His Gln Lys Phe Ile Val His Arg Asp Leu Lys  
130 135 140

Ala Glu Asn Leu Leu Leu Asp Ala Asp Met Asn Ile Lys Ile Ala Asp  
145 150 155 160

Phe Gly Phe Ser Asn Glu Phe Thr Phe Gly Asn Lys Leu Asp Thr Phe  
165 170 175

Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe Gln Gly Lys Lys  
180 185 190

Tyr Asp Gly Pro Glu Val Asp Val Trp Ser Leu Gly Val Ile Leu Tyr  
195 200 205

Thr Leu Val Ser Gly Ser Leu Pro Phe Asp Gly Gln Asn Leu Lys Glu



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210	215	220
Leu Arg Glu Arg Val	Leu Arg Gly Lys Tyr Arg	Ile Pro Phe Tyr Met
225	230	235 240
Ser Thr Asp Cys Glu Asn	Leu Leu Lys Lys Phe Leu Ile Leu Asn Pro	
	245	250 255
Ser Lys Arg Gly Thr Leu Glu Gln Ile Met Lys Asp Arg Trp Met Asn		
	260	265 270
Val Gly His Glu Asp Asp Glu Leu Lys Pro Tyr Val Glu Pro Leu Pro		
	275	280 285
Asp Tyr Lys Asp Pro Arg Arg Thr Glu Leu Met Val Ser Met Gly Tyr		
	290	295 300
Thr Arg Glu Glu Ile Gln Asp Ser Leu Val Gly Gln Arg Tyr Asn Glu		
	305	310 315 320
Val Met Ala Thr Tyr Leu Leu Leu Gly Tyr Lys Ser Ser Glu Leu Glu		
	325	330 335
Gly Asp Thr Ile Thr Leu Lys Pro Arg Pro Ser Ala Asp Leu Thr Asn		
	340	345 350
Ser Ser Ala Gln Phe Pro Ser His Lys Val Gln Arg Ser Val Ser Ala		
	355	360 365
Asn Pro Lys Gln Arg Arg Phe Ser Asp Gln Ala Gly Pro Ala Ile Pro		
	370	375 380
Thr Ser Asn Ser Tyr Ser Lys Lys Thr Gln Ser Asn Asn Ala Glu Asn		
	385	390 395 400
Lys Arg Pro Glu Glu Asp Arg Glu Ser Gly Arg Lys Ala Ser Ser Thr		
	405	410 415
Ala Lys Val Pro Ala Ser Pro Leu Pro Gly Leu Glu Arg Lys Lys Thr		
	420	425 430
Thr Pro Thr Pro Ser Thr Asn Ser Val Leu Ser Thr Ser Thr Asn Arg		
	435	440 445
Ser Arg Asn Ser Pro Leu Leu Glu Arg Ala Ser Leu Gly Gln Ala Ser		
	450	455 460
Ile Gln Asn Gly Lys Asp Ser Leu Thr Met Pro Gly Ser Arg Ala Ser		
	465	470 475 480
Thr Ala Ser Ala Ser Ala Ala Val Ser Ala Ala Arg Pro Arg Gln His		
	485	490 495
Gln Lys Ser Met Ser Ala Ser Val His Pro Asn Lys Ala Ser Gly Leu		
	500	505 510
Pro Pro Thr Glu Ser Asn Cys Glu Val Pro Arg Pro Ser Thr Ala Pro		
	515	520 525
Gln Arg Val Pro Val Ala Ser Pro Ser Ala His Asn Ile Ser Ser Ser		

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530                                      535                                      540  
 Gly Gly Ala Pro Asp Arg Thr Asn Phe Pro Arg Gly Val Ser Ser Arg  
 545                                      550                                      555                                      560  
 Ser Thr Phe His Ala Gly Gln Leu Arg Gln Val Arg Asp Gln Gln Asn  
                                     565                                      570                                      575  
 Leu Pro Tyr Gly Val Thr Pro Ala Ser Pro Ser Gly His Ser Gln Gly  
                                     580                                      585                                      590  
 Arg Arg Gly Ala Ser Gly Ser Ile Phe Ser Lys Phe Thr Ser Lys Phe  
                                     595                                      600                                      605  
 Val Arg Arg Asn Leu Asn Glu Pro Glu Ser Lys Asp Arg Val Glu Thr  
                                     610                                      615                                      620  
 Leu Arg Pro His Val Val Gly Ser Gly Gly Asn Asp Lys Glu Lys Glu  
 625                                      630                                      635                                      640  
 Glu Phe Arg Glu Ala Lys Pro Arg Ser Leu Arg Phe Thr Trp Ser Met  
                                     645                                      650                                      655  
 Lys Thr Thr Ser Ser Met Glu Pro Asn Glu Met Met Arg Glu Ile Arg  
                                     660                                      665                                      670  
 Lys Val Leu Asp Ala Asn Ser Cys Gln Ser Glu Leu His Glu Lys Tyr  
                                     675                                      680                                      685  
 Met Leu Leu Cys Met His Gly Thr Pro Gly His Glu Asp Phe Val Gln  
                                     690                                      695                                      700  
 Trp Glu Met Glu Val Cys Lys Leu Pro Arg Leu Ser Leu Asn Gly Val  
 705                                      710                                      715                                      720  
 Arg Phe Lys Arg Ile Ser Gly Thr Ser Met Ala Phe Lys Asn Ile Ala  
                                     725                                      730                                      735  
 Ser Lys Ile Ala Asn Glu Leu Lys Leu  
                                     740                                      745  
  
 <210> 80  
 <211> 319  
 <212> PRT  
 <213> homo sapiens  
  
 <400> 80  
  
 Met Ser Val Gly Phe Ile Gly Ala Gly Gln Leu Ala Phe Ala Leu Ala  
 1                                      5                                      10                                      15  
 Lys Gly Phe Thr Ala Ala Gly Val Leu Ala Ala His Lys Ile Met Ala  
                                     20                                      25                                      30  
 Ser Ser Pro Asp Met Asp Leu Ala Thr Val Ser Ala Leu Arg Lys Met  
                                     35                                      40                                      45  
 Gly Val Lys Leu Thr Pro His Asn Lys Glu Thr Val Gln His Ser Asp  
                                     50                                      55                                      60

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Val Leu Phe Leu Ala Val Lys Pro His Ile Ile Pro Phe Ile Leu Asp  
 65 70 75 80  
 Glu Ile Gly Ala Asp Ile Glu Asp Arg His Ile Val Val Ser Cys Ala  
 85 90 95  
 Ala Gly Val Thr Ile Ser Ser Ile Glu Lys Lys Leu Ser Ala Phe Arg  
 100 105 110  
 Pro Ala Pro Arg Val Ile Arg Cys Met Thr Asn Thr Pro Val Val Val  
 115 120 125  
 Arg Glu Gly Ala Thr Val Tyr Ala Thr Gly Thr His Ala Gln Val Glu  
 130 135 140  
 Asp Gly Arg Leu Met Glu Gln Leu Leu Ser Thr Val Gly Phe Cys Thr  
 145 150 155 160  
 Glu Val Glu Glu Asp Leu Ile Asp Ala Val Thr Gly Leu Ser Gly Ser  
 165 170 175  
 Gly Pro Ala Tyr Ala Phe Thr Ala Leu Asp Ala Leu Ala Asp Gly Gly  
 180 185 190  
 Val Lys Met Gly Leu Pro Arg Arg Leu Ala Val Arg Leu Gly Ala Gln  
 195 200 205  
 Ala Leu Leu Gly Ala Ala Lys Met Leu Leu His Ser Glu Gln His Pro  
 210 215 220  
 Gly Gln Leu Lys Asp Asn Val Ser Ser Pro Gly Gly Ala Thr Ile His  
 225 230 235 240  
 Ala Leu His Val Leu Glu Ser Gly Gly Phe Arg Ser Leu Leu Ile Asn  
 245 250 255  
 Ala Val Glu Ala Ser Cys Ile Arg Thr Arg Glu Leu Gln Ser Met Ala  
 260 265 270  
 Asp Gln Glu Gln Val Ser Pro Ala Ala Ile Lys Lys Thr Ile Leu Asp  
 275 280 285  
 Lys Val Lys Leu Asp Ser Pro Ala Gly Thr Ala Leu Ser Pro Ser Gly  
 290 295 300  
 His Thr Lys Leu Leu Pro Arg Ser Leu Ala Pro Ala Gly Lys Asp  
 305 310 315  
 <210> 81  
 <211> 148  
 <212> PRT  
 <213> homo sapiens  
 <400> 81  
 Met Ala Glu Ser Asp Trp Asp Thr Val Thr Val Leu Arg Lys Lys Gly  
 1 5 10 15  
 Pro Thr Ala Ala Gln Ala Lys Ser Lys Gln Ala Ile Leu Ala Ala Gln  
 20 25 30

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Arg Arg Gly Glu Asp Val Glu Thr Ser Lys Lys Trp Ala Ala Gly Gln  
 35 40 45  
 Asn Lys Gln His Ser Ile Thr Lys Asn Thr Ala Lys Leu Asp Arg Glu  
 50 55 60  
 Thr Glu Glu Leu His His Asp Arg Val Thr Leu Glu Val Gly Lys Val  
 65 70 75 80  
 Ile Gln Gln Gly Arg Gln Ser Lys Gly Leu Thr Gln Lys Asp Leu Ala  
 85 90 95  
 Thr Lys Ile Asn Glu Lys Pro Gln Val Ile Ala Asp Tyr Glu Ser Gly  
 100 105 110  
 Arg Ala Ile Pro Asn Asn Gln Val Leu Gly Lys Ile Glu Arg Ala Ile  
 115 120 125  
 Gly Leu Lys Leu Arg Gly Lys Asp Ile Gly Lys Pro Ile Glu Lys Gly  
 130 135 140  
 Pro Arg Ala Lys  
 145  
 <210> 82  
 <211> 375  
 <212> PRT  
 <213> homo sapiens  
 <400> 82  
 Met Asp Asp Asp Ile Ala Ala Leu Val Val Asp Asn Gly Ser Gly Met  
 1 5 10 15  
 Cys Lys Ala Gly Phe Ala Gly Asp Asp Ala Pro Arg Ala Val Phe Pro  
 20 25 30  
 Ser Ile Val Gly Arg Pro Arg His Gln Gly Val Met Val Gly Met Gly  
 35 40 45  
 Gln Lys Asp Ser Tyr Val Gly Asp Glu Ala Gln Ser Lys Arg Gly Ile  
 50 55 60  
 Leu Thr Leu Lys Tyr Pro Ile Glu His Gly Ile Val Thr Asn Trp Asp  
 65 70 75 80  
 Asp Met Glu Lys Ile Trp His His Thr Phe Tyr Asn Glu Leu Arg Val  
 85 90 95  
 Ala Pro Glu Glu His Pro Val Leu Leu Thr Glu Ala Pro Leu Asn Pro  
 100 105 110  
 Lys Ala Asn Arg Glu Lys Met Thr Gln Ile Met Phe Glu Thr Phe Asn  
 115 120 125  
 Thr Pro Ala Met Tyr Val Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala  
 130 135 140  
 Ser Gly Arg Thr Thr Gly Ile Val Met Asp Ser Gly Asp Gly Val Thr

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145		150		155		160
His Thr Val Pro Ile Tyr Glu Gly Tyr Ala Leu Pro His Ala Ile Leu						
	165			170		175
Arg Leu Asp Leu Ala Gly Arg Asp Leu Thr Asp Tyr Leu Met Lys Ile						
	180		185			190
Leu Thr Glu Arg Gly Tyr Ser Phe Thr Thr Thr Ala Glu Arg Glu Ile						
	195		200			205
Val Arg Asp Ile Lys Glu Lys Leu Cys Tyr Val Ala Leu Asp Phe Glu						
	210		215			220
Gln Glu Met Ala Thr Ala Ala Ser Ser Ser Ser Leu Glu Lys Ser Tyr						
	225		230		235	240
Glu Leu Pro Asp Gly Gln Val Ile Thr Ile Gly Asn Glu Arg Phe Arg						
	245			250		255
Cys Pro Glu Ala Leu Phe Gln Pro Ser Phe Leu Gly Met Glu Ser Cys						
	260		265			270
Gly Ile His Glu Thr Thr Phe Asn Ser Ile Met Lys Cys Asp Val Asp						
	275		280			285
Ile Arg Lys Asp Leu Tyr Ala Asn Thr Val Leu Ser Gly Gly Thr Thr						
	290		295			300
Met Tyr Pro Gly Ile Ala Asp Arg Met Gln Lys Glu Ile Thr Ala Leu						
	305		310		315	320
Ala Pro Ser Thr Met Lys Ile Lys Ile Ile Ala Pro Pro Glu Arg Lys						
	325			330		335
Tyr Ser Val Trp Ile Gly Gly Ser Ile Leu Ala Ser Leu Ser Thr Phe						
	340		345			350
Gln Gln Met Trp Ile Ser Lys Gln Glu Tyr Asp Glu Ser Gly Pro Ser						
	355		360			365
Ile Val His Arg Lys Cys Phe						
	370		375			

&lt;210&gt; 83

&lt;211&gt; 268

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 83

Met Phe Arg Met Leu Asn Ser Ser Phe Glu Asp Asp Pro Phe Phe Ser						
1		5			10	15
Glu Ser Ile Leu Ala His Arg Glu Asn Met Arg Gln Met Ile Arg Ser						
	20			25		30
Phe Ser Glu Pro Phe Gly Arg Asp Leu Leu Ser Ile Ser Asp Gly Arg						
	35		40			45

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Gly Arg Ala His Asn Arg Arg Gly His Asn Asp Gly Glu Asp Ser Leu  
50 55 60

Thr His Thr Asp Val Ser Ser Phe Gln Thr Met Asp Gln Met Val Ser  
65 70 75 80

Asn Met Arg Asn Tyr Met Gln Lys Leu Glu Arg Asn Phe Gly Gln Leu  
85 90 95

Ser Val Asp Pro Asn Gly His Ser Phe Cys Ser Ser Ser Val Met Thr  
100 105 110

Tyr Ser Lys Ile Gly Asp Glu Pro Pro Lys Val Phe Gln Ala Ser Thr  
115 120 125

Gln Thr Arg Arg Ala Pro Gly Gly Ile Lys Glu Thr Arg Lys Ala Met  
130 135 140

Arg Asp Ser Asp Ser Gly Leu Glu Lys Met Ala Ile Gly His His Ile  
145 150 155 160

His Asp Arg Ala His Val Ile Lys Lys Ser Lys Asn Lys Lys Thr Gly  
165 170 175

Asp Glu Glu Val Asn Gln Glu Phe Ile Asn Met Asn Glu Ser Asp Ala  
180 185 190

His Ala Phe Asp Glu Glu Trp Gln Ser Glu Val Leu Lys Tyr Lys Pro  
195 200 205

Gly Arg His Asn Leu Gly Asn Thr Arg Met Arg Ser Val Gly His Glu  
210 215 220

Asn Pro Gly Ser Arg Glu Leu Lys Arg Arg Glu Lys Pro Gln Gln Ser  
225 230 235 240

Pro Ala Ile Glu His Gly Arg Arg Ser Asn Val Leu Gly Asp Lys Leu  
245 250 255

His Ile Lys Gly Ser Ser Val Lys Ser Asn Lys Lys  
260 265

<210> 84

<211> 837

<212> PRT

<213> homo sapiens

<400> 84

Met Ala Glu Pro Ser Gln Ala Pro Thr Pro Ala Pro Ala Ala Gln Pro  
1 5 10 15

Arg Pro Leu Gln Ser Pro Ala Pro Ala Pro Thr Pro Thr Pro Ala Pro  
20 25 30

Ser Pro Ala Ser Ala Pro Ile Pro Thr Pro Thr Pro Ala Pro Ala Pro  
35 40 45

Ala Pro Ala Ala Ala Pro Ala Gly Ser Thr Gly Thr Gly Gly Pro Gly  
50 55 60

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Val Gly Ser Gly Gly Ala Gly Ser Gly Gly Asp Pro Ala Arg Pro Gly  
 65 70 75 80  
 Leu Ser Gln Gln Gln Arg Ala Ser Gln Arg Lys Ala Gln Val Arg Gly  
 85 90 95  
 Leu Pro Arg Ala Lys Lys Leu Glu Lys Leu Gly Val Phe Ser Ala Cys  
 100 105 110  
 Lys Ala Asn Gly Thr Cys Lys Cys Asn Gly Trp Lys Asn Pro Lys Pro  
 115 120 125  
 Pro Thr Ala Pro Arg Ile Asp Leu Gln Gln Pro Ala Ala Asn Leu Ser  
 130 135 140  
 Glu Leu Cys Arg Ser Cys Glu His Pro Leu Ala Asp His Val Ser His  
 145 150 155 160  
 Leu Glu Asn Val Ser Glu Asp Glu Ile Asn Arg Leu Leu Gly Met Val  
 165 170 175  
 Val Asp Val Glu Asn Leu Phe Met Ser Val His Lys Glu Glu Asp Thr  
 180 185 190  
 Asp Thr Lys Gln Val Tyr Phe Tyr Leu Phe Lys Leu Leu Arg Lys Cys  
 195 200 205  
 Ile Leu Gln Met Thr Arg Pro Val Val Glu Gly Ser Leu Gly Ser Pro  
 210 215 220  
 Pro Phe Glu Lys Pro Asn Ile Glu Gln Gly Val Leu Asn Phe Val Gln  
 225 230 235 240  
 Tyr Lys Phe Ser His Leu Ala Pro Arg Glu Arg Gln Thr Met Phe Glu  
 245 250 255  
 Leu Ser Lys Met Phe Leu Leu Cys Leu Asn Tyr Trp Glu Leu Glu Thr  
 260 265 270  
 Pro Ala Gln Phe Arg Gln Arg Ser Gln Ala Glu Asp Val Ala Thr Tyr  
 275 280 285  
 Lys Val Asn Tyr Thr Arg Trp Leu Cys Tyr Cys His Val Pro Gln Ser  
 290 295 300  
 Cys Asp Ser Leu Pro Arg Tyr Glu Thr Thr His Val Phe Gly Arg Ser  
 305 310 315 320  
 Leu Leu Arg Ser Ile Phe Thr Val Thr Arg Arg Gln Leu Leu Glu Lys  
 325 330 335  
 Phe Arg Val Glu Lys Asp Lys Leu Val Pro Glu Lys Arg Thr Leu Ile  
 340 345 350  
 Leu Thr His Phe Pro Lys Phe Leu Ser Met Leu Glu Glu Glu Ile Tyr  
 355 360 365  
 Gly Ala Asn Ser Pro Ile Trp Glu Ser Gly Phe Thr Met Pro Pro Ser  
 370 375 380

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Glu Gly Thr Gln Leu Val Pro Arg Pro Ala Ser Val Ser Ala Ala Val  
 385 390 395 400  
 Val Pro Ser Thr Pro Ile Phe Ser Pro Ser Met Gly Gly Gly Ser Asn  
 405 410 415  
 Ser Ser Leu Ser Leu Asp Ser Ala Gly Ala Glu Pro Met Pro Gly Glu  
 420 425 430  
 Lys Arg Thr Leu Pro Glu Asn Leu Thr Leu Glu Asp Ala Lys Arg Leu  
 435 440 445  
 Arg Val Met Gly Asp Ile Pro Met Glu Leu Val Asn Glu Val Met Leu  
 450 455 460  
 Thr Ile Thr Asp Pro Ala Ala Met Leu Gly Pro Glu Thr Ser Leu Leu  
 465 470 475 480  
 Ser Ala Asn Ala Ala Arg Asp Glu Thr Ala Arg Leu Glu Glu Arg Arg  
 485 490 495  
 Gly Ile Ile Glu Phe His Val Ile Gly Asn Ser Leu Thr Pro Lys Ala  
 500 505 510  
 Asn Arg Arg Val Leu Leu Trp Leu Val Gly Leu Gln Asn Val Phe Ser  
 515 520 525  
 His Gln Leu Pro Arg Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Phe  
 530 535 540  
 Asp Pro Lys His Lys Thr Leu Ala Leu Ile Lys Asp Gly Arg Val Ile  
 545 550 555 560  
 Gly Gly Ile Cys Phe Arg Met Phe Pro Thr Gln Gly Phe Thr Glu Ile  
 565 570 575  
 Val Phe Cys Ala Val Thr Ser Asn Glu Gln Val Lys Gly Tyr Gly Thr  
 580 585 590  
 His Leu Met Asn His Leu Lys Glu Tyr His Ile Lys His Asn Ile Leu  
 595 600 605  
 Tyr Phe Leu Thr Tyr Ala Asp Glu Tyr Ala Ile Gly Tyr Phe Lys Lys  
 610 615 620  
 Gln Gly Phe Ser Lys Asp Ile Lys Val Pro Lys Ser Arg Tyr Leu Gly  
 625 630 635 640  
 Tyr Ile Lys Asp Tyr Glu Gly Ala Thr Leu Met Glu Cys Glu Leu Asn  
 645 650 655  
 Pro Arg Ile Pro Tyr Thr Glu Leu Ser His Ile Ile Lys Lys Gln Lys  
 660 665 670  
 Glu Ile Ile Lys Lys Leu Ile Glu Arg Lys Gln Ala Gln Ile Arg Lys  
 675 680 685  
 Val Tyr Pro Gly Leu Ser Cys Phe Lys Glu Gly Val Arg Gln Ile Pro  
 690 695 700



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Val Glu Ser Val Pro Gly Ile Arg Glu Thr Gly Trp Lys Pro Leu Gly  
 705 710 715 720  
 Lys Glu Lys Gly Lys Glu Leu Lys Asp Pro Asp Gln Leu Tyr Thr Thr  
 725 730 735  
 Leu Lys Asn Leu Leu Ala Gln Ile Lys Ser His Pro Ser Ala Trp Pro  
 740 745 750  
 Phe Met Glu Pro Val Lys Lys Ser Glu Ala Pro Asp Tyr Tyr Glu Val  
 755 760 765  
 Ile Arg Phe Pro Ile Asp Leu Lys Thr Met Thr Glu Arg Leu Arg Ser  
 770 775 780  
 Arg Tyr Tyr Val Thr Arg Lys Leu Phe Val Ala Asp Leu Gln Arg Val  
 785 790 795 800  
 Ile Ala Asn Cys Arg Glu Tyr Asn Pro Pro Asp Ser Glu Tyr Cys Arg  
 805 810 815  
 Cys Ala Ser Ala Leu Glu Lys Phe Phe Tyr Phe Lys Leu Lys Glu Gly  
 820 825 830  
 Gly Leu Ile Asp Lys  
 835  
 <210> 85  
 <211> 483  
 <212> PRT  
 <213> homo sapiens  
 <400> 85  
 Met Lys Glu Glu Lys Glu His Arg Pro Lys Glu Lys Arg Val Thr Leu  
 1 5 10 15  
 Leu Thr Pro Ala Gly Ala Thr Gly Ser Gly Gly Gly Thr Ser Gly Asp  
 20 25 30  
 Ser Ser Lys Gly Glu Asp Lys Gln Asp Arg Asn Lys Glu Lys Lys Glu  
 35 40 45  
 Ala Leu Ser Lys Val Val Ile Arg Arg Leu Pro Pro Thr Leu Thr Lys  
 50 55 60  
 Glu Gln Leu Gln Glu His Leu Gln Pro Met Pro Glu His Asp Tyr Phe  
 65 70 75 80  
 Glu Phe Phe Ser Asn Asp Thr Ser Leu Tyr Pro His Met Tyr Ala Arg  
 85 90 95  
 Ala Tyr Ile Asn Phe Lys Asn Gln Glu Asp Ile Ile Leu Phe Arg Asp  
 100 105 110  
 Arg Phe Asp Gly Tyr Val Phe Leu Asp Asn Lys Gly Gln Glu Tyr Pro  
 115 120 125  
 Ala Ile Val Glu Phe Ala Pro Phe Gln Lys Ala Ala Lys Lys Lys Thr

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130	135	140
Lys Lys Arg Asp Thr Lys Val Gly Thr Ile Asp Asp Asp Pro Glu Tyr		
145	150	155 160
Arg Lys Phe Leu Glu Ser Tyr Ala Thr Asp Asn Glu Lys Met Thr Ser		
	165	170 175
Thr Pro Glu Thr Leu Leu Glu Glu Ile Glu Ala Lys Asn Arg Glu Leu		
	180	185 190
Ile Ala Lys Lys Thr Thr Pro Leu Leu Ser Phe Leu Lys Asn Lys Gln		
	195	200 205
Arg Met Arg Glu Glu Lys Arg Glu Glu Arg Arg Arg Arg Glu Ile Glu		
	210	215 220
Arg Lys Arg Gln Arg Glu Glu Glu Arg Arg Lys Trp Lys Glu Glu Glu		
	225	230 235 240
Lys Arg Lys Arg Lys Asp Ile Glu Lys Leu Lys Lys Ile Asp Arg Ile		
	245	250 255
Pro Glu Arg Asp Lys Leu Lys Asp Glu Pro Lys Ile Lys Val His Arg		
	260	265 270
Phe Leu Leu Gln Ala Val Asn Gln Lys Asn Leu Leu Lys Lys Pro Glu		
	275	280 285
Lys Gly Asp Glu Lys Glu Leu Asp Lys Arg Glu Lys Ala Lys Lys Leu		
	290	295 300
Asp Lys Glu Asn Leu Ser Asp Glu Arg Ala Ser Gly Gln Ser Cys Thr		
	305	310 315 320
Leu Pro Lys Arg Ser Asp Ser Glu Leu Lys Asp Glu Lys Pro Lys Arg		
	325	330 335
Pro Glu Asp Glu Ser Gly Arg Asp Tyr Arg Glu Arg Glu Arg Glu Tyr		
	340	345 350
Glu Arg Asp Gln Glu Arg Ile Leu Arg Glu Arg Glu Arg Leu Lys Arg		
	355	360 365
Gln Glu Glu Glu Arg Arg Arg Gln Lys Glu Arg Tyr Glu Lys Glu Lys		
	370	375 380
Thr Phe Lys Arg Lys Glu Glu Glu Met Lys Lys Glu Lys Asp Thr Leu		
	385	390 395 400
Arg Asp Lys Gly Lys Lys Ala Glu Ser Thr Glu Ser Ile Gly Ser Ser		
	405	410 415
Glu Lys Thr Glu Lys Lys Glu Glu Val Val Lys Arg Asp Arg Ile Arg		
	420	425 430
Asn Lys Asp Arg Pro Ala Met Gln Leu Tyr Gln Pro Gly Ala Arg Ser		
	435	440 445
Arg Asn Arg Leu Cys Pro Pro Asp Asp Ser Thr Lys Ser Gly Asp Ser		

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450

455

460

Ala Ala Glu Arg Lys Gln Glu Ser Gly Ile Ser His Arg Lys Glu Gly  
 465 470 475 480

Gly Glu Glu

&lt;210&gt; 86

&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 86

Met Ala Asn Asp Ser Gly Gly Pro Gly Gly Pro Ser Pro Ser Glu Arg  
 1 5 10 15

Asp Arg Gln Tyr Cys Glu Leu Cys Gly Lys Met Glu Asn Leu Leu Arg  
 20 25 30

Cys Ser Arg Cys Arg Ser Ser Phe Tyr Cys Cys Lys Glu His Gln Arg  
 35 40 45

Gln Asp Trp Lys Lys His Lys Leu Val Cys Gln Gly Ser Glu Gly Ala  
 50 55 60

Leu Gly His Gly Val Gly Pro His Gln His Ser Gly Pro Ala Pro Pro  
 65 70 75 80

Ala Ala Val Pro Pro Arg Ala Gly Ala Arg Glu Pro Arg Lys Ala  
 85 90 95

Ala Ala Arg Arg Asp Asn Ala Ser Gly Asp Ala Ala Lys Gly Lys Val  
 100 105 110

Lys Ala Lys Pro Pro Ala Asp Pro Ala Ala Ala Ala Ser Pro Cys Arg  
 115 120 125

Ala Ala Ala Gly Gly Gln Gly Ser Ala Val Ala Ala Glu Ala Glu Pro  
 130 135 140

Gly Lys Glu Glu Pro Pro Ala Arg Ser Ser Leu Phe Gln Glu Lys Ala  
 145 150 155 160

Asn Leu Tyr Pro Pro Ser Asn Thr Pro Gly Asp Ala Leu Ser Pro Gly  
 165 170 175

Gly Gly Leu Arg Pro Asn Gly Gln Thr Lys Pro Leu Pro Ala Leu Lys  
 180 185 190

Leu Ala Leu Glu Tyr Ile Val Pro Cys Met Asn Lys His Gly Ile Cys  
 195 200 205

Val Val Asp Asp Phe Leu Gly Lys Glu Thr Gly Gln Gln Ile Gly Asp  
 210 215 220

Glu Val Arg Ala Leu His Asp Thr Gly Lys Phe Thr Asp Gly Gln Leu  
 225 230 235 240

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Val Ser Gln Lys Ser Asp Ser Ser Lys Asp Ile Arg Gly Asp Lys Ile  
245 250 255

Thr Trp Ile Glu Gly Lys Glu Pro Gly Cys Glu Thr Ile Gly Leu Leu  
260 265 270

Met Ser Ser Met Asp Asp Leu Ile Arg His Cys Asn Gly Lys Leu Gly  
275 280 285

Ser Tyr Lys Ile Asn Gly Arg Thr Lys Ala Met Val Ala Cys Tyr Pro  
290 295 300

Gly Asn Gly Thr Gly Tyr Val Arg His Val Asp Asn Pro Asn Gly Asp  
305 310 315 320

Gly Arg Cys Val Thr Cys Ile Tyr Tyr Leu Asn Lys Asp Trp Asp Ala  
325 330 335

Lys Val Ser Gly Gly Ile Leu Arg Ile Phe Pro Glu Gly Lys Ala Gln  
340 345 350

Phe Ala Asp Ile Glu Pro Lys Phe Asp Arg Leu Leu Phe Phe Trp Ser  
355 360 365

Asp Arg Arg Asn Pro His Glu Val Gln Pro Ala Tyr Ala Thr Arg Tyr  
370 375 380

Ala Ile Thr Val Trp Tyr Phe Asp Ala Asp Glu Arg Ala Arg Ala Lys  
385 390 395 400

Val Lys Tyr Leu Thr Gly Glu Lys Gly Val Arg Val Glu Leu Asn Lys  
405 410 415

Pro Ser Asp Ser Val Gly Lys Asp Val Phe  
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<210> 87

<211> 1320

<212> PRT

<213> homo sapiens

<400> 87

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Glu Ser Lys Asp Gly Asp Pro Arg Lys Glu Thr Gly Ser Arg Tyr Val  
35 40 45

Ala Gln Ala Gly Leu Glu Pro Leu Ala Ser Gly Asp Pro Ser Ala Ser  
50 55 60

Ala Ser His Ala Ala Gly Ile Thr Gly Ser Arg His Arg Thr Arg Leu  
65 70 75 80

Phe Phe Pro Ser Ser Ser Gly Ser Ala Ser Thr Pro Gln Glu Glu Gln  
85 90 95

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Thr Lys Glu Gly Ala Cys Glu Asp Pro His Asp Leu Leu Ala Thr Pro  
 100 105 110  
 Thr Pro Glu Leu Leu Leu Asp Trp Arg Gln Ser Ala Glu Glu Val Ile  
 115 120 125  
 Val Lys Leu Arg Val Gly Val Gly Pro Leu Gln Leu Glu Asp Val Asp  
 130 135 140  
 Ala Ala Phe Thr Asp Thr Asp Cys Val Val Arg Phe Ala Gly Gly Gln  
 145 150 155 160  
 Gln Trp Gly Gly Val Phe Tyr Ala Glu Ile Lys Ser Ser Cys Ala Lys  
 165 170 175  
 Val Gln Thr Arg Lys Gly Ser Leu Leu His Leu Thr Leu Pro Lys Lys  
 180 185 190  
 Val Pro Met Leu Thr Trp Pro Ser Leu Leu Val Glu Ala Asp Glu Gln  
 195 200 205  
 Leu Cys Ile Pro Pro Leu Asn Ser Gln Thr Cys Leu Leu Gly Ser Glu  
 210 215 220  
 Glu Asn Leu Ala Pro Leu Ala Gly Glu Lys Ala Val Pro Pro Gly Asn  
 225 230 235 240  
 Asp Pro Val Ser Pro Ala Met Val Arg Ser Arg Asn Pro Gly Lys Asp  
 245 250 255  
 Asp Cys Ala Lys Glu Glu Met Ala Val Ala Ala Asp Ala Ala Thr Leu  
 260 265 270  
 Val Asp Glu Pro Glu Ser Met Val Asn Leu Ala Phe Val Lys Asn Asp  
 275 280 285  
 Ser Tyr Glu Lys Gly Pro Asp Ser Val Val Val His Val Tyr Val Lys  
 290 295 300  
 Glu Ile Cys Arg Asp Thr Ser Arg Val Leu Phe Arg Glu Gln Asp Phe  
 305 310 315 320  
 Thr Leu Ile Phe Gln Thr Arg Asp Gly Asn Phe Leu Arg Leu His Pro  
 325 330 335  
 Gly Cys Gly Pro His Thr Thr Phe Arg Trp Gln Val Lys Leu Arg Asn  
 340 345 350  
 Leu Ile Glu Pro Glu Gln Cys Thr Phe Cys Phe Thr Ala Ser Arg Ile  
 355 360 365  
 Asp Ile Cys Leu Arg Lys Arg Gln Ser Gln Arg Trp Gly Gly Leu Glu  
 370 375 380  
 Ala Pro Ala Ala Arg Gly Ala Val Gly Gly Ala Lys Val Ala Val Pro  
 385 390 395 400  
 Thr Gly Pro Thr Pro Leu Asp Ser Thr Pro Pro Gly Gly Ala Pro His  
 405 410 415

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Pro Leu Thr Gly Gln Glu Glu Ala Arg Ala Val Glu Lys Asp Lys Ser  
 420 425 430  
 Lys Ala Arg Ser Glu Asp Thr Gly Leu Asp Ser Val Ala Thr Arg Thr  
 435 440 445  
 Pro Met Glu His Val Thr Pro Lys Pro Glu Thr His Leu Ala Ser Pro  
 450 455 460  
 Lys Pro Thr Cys Met Val Pro Pro Met Pro His Ser Pro Val Ser Gly  
 465 470 475 480  
 Asp Ser Val Glu Glu Glu Glu Glu Glu Lys Lys Val Cys Leu Pro  
 485 490 495  
 Gly Phe Thr Gly Leu Val Asn Leu Gly Asn Thr Cys Phe Met Asn Ser  
 500 505 510  
 Val Ile Gln Ser Leu Ser Asn Thr Arg Glu Leu Arg Asp Phe Phe His  
 515 520 525  
 Asp Arg Ser Phe Glu Ala Glu Ile Asn Tyr Asn Asn Pro Leu Gly Thr  
 530 535 540  
 Gly Gly Arg Leu Ala Ile Gly Phe Ala Val Leu Leu Arg Ala Leu Trp  
 545 550 555 560  
 Lys Gly Thr His His Ala Phe Gln Pro Ser Lys Leu Lys Ala Ile Val  
 565 570 575  
 Ala Ser Lys Ala Ser Gln Phe Thr Gly Tyr Ala Gln His Asp Ala Gln  
 580 585 590  
 Glu Phe Met Ala Phe Leu Leu Asp Gly Leu His Glu Asp Leu Asn Arg  
 595 600 605  
 Ile Gln Asn Lys Pro Tyr Thr Glu Thr Val Asp Ser Asp Gly Arg Pro  
 610 615 620  
 Asp Glu Val Val Ala Glu Glu Ala Trp Gln Arg His Lys Met Arg Asn  
 625 630 635 640  
 Asp Ser Phe Ile Val Asp Leu Phe Gln Gly Gln Tyr Lys Ser Lys Leu  
 645 650 655  
 Val Cys Pro Val Cys Ala Lys Val Ser Ile Thr Phe Asp Pro Phe Leu  
 660 665 670  
 Tyr Leu Pro Val Pro Leu Pro Gln Lys Gln Lys Val Leu Pro Val Phe  
 675 680 685  
 Tyr Phe Ala Arg Glu Pro His Ser Lys Pro Ile Lys Phe Leu Val Ser  
 690 695 700  
 Val Ser Lys Glu Asn Ser Thr Ala Ser Glu Val Leu Asp Ser Leu Ser  
 705 710 715 720  
 Gln Ser Val His Val Lys Pro Glu Asn Leu Arg Leu Ala Glu Val Ile  
 725 730 735

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Lys Asn Arg Phe His Arg Val Phe Leu Pro Ser His Ser Leu Asp Thr  
 740 745 750  
 Val Ser Pro Ser Asp Thr Leu Leu Cys Phe Glu Leu Leu Ser Ser Glu  
 755 760 765  
 Leu Ala Lys Glu Arg Val Val Val Leu Glu Val Gln Gln Arg Pro Gln  
 770 775 780  
 Val Pro Ser Val Pro Ile Ser Lys Cys Ala Ala Cys Gln Arg Lys Gln  
 785 790 795 800  
 Gln Ser Glu Asp Glu Lys Leu Lys Arg Cys Thr Arg Cys Tyr Arg Val  
 805 810 815  
 Gly Tyr Cys Asn Gln Leu Cys Gln Lys Thr His Trp Pro Asp His Lys  
 820 825 830  
 Gly Leu Cys Arg Pro Glu Asn Ile Gly Tyr Pro Phe Leu Val Ser Val  
 835 840 845  
 Pro Ala Ser Arg Leu Thr Tyr Ala Arg Leu Ala Gln Leu Leu Glu Gly  
 850 855 860  
 Tyr Ala Arg Tyr Ser Val Ser Val Phe Gln Pro Pro Phe Gln Pro Gly  
 865 870 875 880  
 Arg Met Ala Leu Glu Ser Gln Ser Pro Gly Cys Thr Thr Leu Leu Ser  
 885 890 895  
 Thr Gly Ser Leu Glu Ala Gly Asp Ser Glu Arg Asp Pro Ile Gln Pro  
 900 905 910  
 Pro Glu Leu Gln Leu Val Thr Pro Met Ala Glu Gly Asp Thr Gly Leu  
 915 920 925  
 Pro Arg Val Trp Ala Ala Pro Asp Arg Gly Pro Val Pro Ser Thr Ser  
 930 935 940  
 Gly Ile Ser Ser Glu Met Leu Ala Ser Gly Pro Ile Glu Val Gly Ser  
 945 950 955 960  
 Leu Pro Ala Gly Glu Arg Val Ser Arg Pro Glu Ala Ala Val Pro Gly  
 965 970 975  
 Tyr Gln His Pro Ser Glu Ala Met Asn Ala His Thr Pro Gln Phe Phe  
 980 985 990  
 Ile Tyr Lys Ile Asp Ser Ser Asn Arg Glu Gln Arg Leu Glu Asp Lys  
 995 1000 1005  
 Gly Asp Thr Pro Leu Glu Leu Gly Asp Asp Cys Ser Leu Ala Leu  
 1010 1015 1020  
 Val Trp Arg Asn Asn Glu Arg Leu Gln Glu Phe Val Leu Val Ala  
 1025 1030 1035  
 Ser Lys Glu Leu Glu Cys Ala Glu Asp Pro Gly Ser Ala Gly Glu  
 1040 1045 1050

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Ala	Ala	Arg	Ala	Gly	His	Phe	Thr	Leu	Asp	Gln	Cys	Leu	Asn	Leu
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Phe	Thr	Arg	Pro	Glu	Val	Leu	Ala	Pro	Glu	Glu	Ala	Trp	Tyr	Cys
1070						1075					1080			
Pro	Gln	Cys	Lys	Gln	His	Arg	Glu	Ala	Ser	Lys	Gln	Leu	Leu	Leu
1085						1090					1095			
Trp	Arg	Leu	Pro	Asn	Val	Leu	Ile	Val	Gln	Leu	Lys	Arg	Phe	Ser
1100						1105					1110			
Phe	Arg	Ser	Phe	Ile	Trp	Arg	Asp	Lys	Ile	Asn	Asp	Leu	Val	Glu
1115						1120					1125			
Phe	Pro	Val	Arg	Asn	Leu	Asp	Leu	Ser	Lys	Phe	Cys	Ile	Gly	Gln
1130						1135					1140			
Lys	Glu	Glu	Gln	Leu	Pro	Ser	Tyr	Asp	Leu	Tyr	Ala	Val	Ile	Asn
1145						1150					1155			
His	Tyr	Gly	Gly	Met	Ile	Gly	Gly	His	Tyr	Thr	Ala	Cys	Ala	Arg
1160						1165					1170			
Leu	Pro	Asn	Asp	Arg	Ser	Ser	Gln	Arg	Ser	Asp	Val	Gly	Trp	Arg
1175						1180					1185			
Leu	Phe	Asp	Asp	Ser	Thr	Val	Thr	Thr	Val	Asp	Glu	Ser	Gln	Val
1190						1195					1200			
Val	Thr	Arg	Tyr	Ala	Tyr	Val	Leu	Phe	Tyr	Arg	Arg	Arg	Asn	Ser
1205						1210					1215			
Pro	Val	Glu	Arg	Pro	Pro	Arg	Ala	Gly	His	Ser	Glu	His	His	Pro
1220						1225					1230			
Asp	Leu	Gly	Pro	Ala	Ala	Glu	Ala	Ala	Ala	Ser	Gln	Ala	Ser	Arg
1235						1240					1245			
Ile	Trp	Gln	Glu	Leu	Glu	Ala	Glu	Glu	Glu	Pro	Val	Pro	Glu	Gly
1250						1255					1260			
Ser	Gly	Pro	Leu	Gly	Pro	Trp	Gly	Pro	Gln	Asp	Trp	Val	Gly	Pro
1265						1270					1275			
Leu	Pro	Arg	Gly	Pro	Thr	Thr	Pro	Asp	Glu	Gly	Cys	Leu	Arg	Tyr
1280						1285					1290			
Phe	Val	Leu	Gly	Thr	Val	Ala	Ala	Leu	Val	Ala	Leu	Val	Leu	Asn
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 <211> 325  
 <212> PRT  
 <213> homo sapiens



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&lt;400&gt; 88

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Asp Arg Val Cys Lys Ser His Leu Leu Asp Cys Cys Pro His Asp Ile
35          40          45

Leu Ala Gly Thr Arg Met Asp Leu Gly Glu Cys Thr Lys Ile His Asp
50          55          60

Leu Ala Leu Arg Ala Asp Tyr Glu Ile Ala Ser Lys Glu Arg Asp Leu
65          70          75          80

Phe Phe Glu Leu Asp Ala Met Asp His Leu Glu Ser Phe Ile Ala Glu
85          90          95

Cys Asp Arg Arg Thr Glu Leu Ala Lys Lys Arg Leu Ala Glu Thr Gln
100         105         110

Glu Glu Ile Ser Ala Glu Val Ser Ala Lys Ala Glu Lys Val His Glu
115         120         125

Leu Asn Glu Glu Ile Gly Lys Leu Leu Ala Lys Ala Glu Gln Leu Gly
130         135         140

Ala Glu Gly Asn Val Asp Glu Ser Gln Lys Ile Leu Met Glu Val Glu
145         150         155         160

Lys Val Arg Ala Lys Lys Lys Glu Ala Glu Glu Glu Tyr Arg Asn Ser
165         170         175

Met Pro Ala Ser Ser Phe Gln Gln Gln Lys Leu Arg Val Cys Glu Val
180         185         190

Cys Ser Ala Tyr Leu Gly Leu His Asp Asn Asp Arg Arg Leu Ala Asp
195         200         205

His Phe Gly Gly Lys Leu His Leu Gly Phe Ile Gln Ile Arg Glu Lys
210         215         220

Leu Asp Gln Leu Arg Lys Thr Val Ala Glu Lys Gln Glu Lys Arg Asn
225         230         235         240

Gln Asp Arg Leu Arg Arg Arg Glu Glu Arg Glu Arg Glu Glu Arg Leu
245         250         255

Ser Arg Arg Ser Gly Ser Arg Thr Arg Asp Arg Arg Arg Ser Arg Ser
260         265         270

Arg Asp Arg Arg Arg Arg Arg Ser Arg Ser Thr Ser Arg Glu Arg Arg
275         280         285

Lys Leu Ser Arg Ser Arg Ser Arg Asp Arg His Arg Arg His Arg Ser
290         295         300

Arg Ser Arg Ser His Ser Arg Gly His Arg Arg Ala Ser Arg Asp Arg

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<400> 90

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Glu Leu Gln Ile Ser Leu Lys Asn Tyr Asp Pro Gln Lys Asp Lys Arg  
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 Phe Ser Gly Thr Val Arg Leu Lys Ser Thr Pro Arg Pro Lys Phe Ser  
       50                          55                          60  
 Val Cys Val Leu Gly Asp Gln Gln His Cys Asp Glu Ala Lys Ala Val  
   65                          70                          75                          80  
 Asp Ile Pro His Met Asp Ile Glu Ala Leu Lys Lys Leu Asn Lys Asn  
                           85                          90                          95  
 Lys Lys Leu Val Lys Lys Leu Ala Lys Lys Tyr Asp Ala Phe Leu Ala  
                          100                         105                         110  
 Ser Glu Ser Leu Ile Lys Gln Ile Pro Arg Ile Leu Gly Pro Gly Leu  
          115                         120                         125  
 Asn Lys Ala Gly Lys Phe Pro Ser Leu Leu Thr His Asn Glu Asn Met  
      130                         135                         140  
 Val Ala Lys Val Asp Glu Val Lys Ser Thr Ile Lys Phe Gln Met Lys  
  145                         150                         155                         160  
 Lys Val Leu Cys Leu Ala Val Ala Val Gly His Val Lys Met Thr Asp  
                          165                         170                         175  
 Asp Glu Leu Val Tyr Asn Ile His Leu Ala Val Asn Phe Leu Val Ser  
          180                         185                         190  
 Leu Leu Lys Lys Asn Trp Gln Asn Val Arg Ala Leu Tyr Ile Lys Ser  
      195                         200                         205  
 Thr Met Gly Lys Pro Gln Arg Leu Tyr  
      210                         215

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24

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<220>  
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23

<210> 93

-144-

<211> 20  
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agaattggca gaggctcgtc atca 24

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<220>  
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<223> n is a, c, g, or t

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&lt;223&gt; n is a, c, g, or t

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tagcctccga tgaggaaatt caaggcaciaa aggatgctgt tattcaagac ctggaacgaa	120
aacttcgctt caaggaggac ctctgaaca atggccagcc gaggttaaca tacgaagaaa	180
gaatggctcg tcgactgcta ggtgctgaca gtgcaactgt ctttaattatt caggagccag	240
aagaggaaac agctaatacag gaatacaaag tctccagctg tgaacagaga ctcatcagt	300
aaatagagta caggctagaa aggtctcctg tggatgaatc aggtgatgaa gttcagtatg	360
gagatgtgcc tgtggaaaat ggaatggcac cattctttga gatgaagctg aaacattaca	420
agatctttga ggaatgccca gtaactttca catgtagagt ggctggaaat ccaaagccaa	480
agatctattg gtttaaagat gggaagcaga tctctccaaa gagtgatcac tacaccattc	540
aaagagatct cgatgggacc tgctccctcc ataccacagc ctccacccta gatgatgatg	600
ggaattatac aattatggct gcaaaccctc agggccgcat cagttgtact ggacggctaa	660
tggtacaggc tgtcaaccaa agaggtcgaa gtccccggtc tccctcaggc catcctcatg	720
tcagaangnc tcgttctaga tcaagggaca gtggagacga aaatgacca attcaggagc	780
gattcttcag acctcacttc ttgcaggctc ctggagatct gactgggtcaa gaaggaaact	840
ctgcagatgg actgcaaagt cagtgggnta ccaccccaga tcta	884

&lt;210&gt; 98

&lt;211&gt; 886

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (695)..(695)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (731)..(731)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (740)..(740)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (798)..(798)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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aaaaaaaaatc ctgttccatg tcagaaatat agtttacgga attcaagtaa tgttatgtta      120
gatgataaac aatgtaaaat aaaacaaata caactgttaa ctaaaaaaag tgagtgcagc      180
atattactttt ctaaacaaac ttcagatttt ctgcaagtct gtaatgatac tttagagaaa      240
tctgaactaa ctgttccctg tgatatagta atcgaccacc atgtttcata tgctgctttt      300
agtgctaatt caaaactact tctgaagaac tcagataaaa atgtccatag tatgtctatg      360
ttggtgaaac ctaactcaag ccctggggga aaaactatgt gtaaaaatat gagtgatatg      420
caaacagtc aatttaataa ctgtttggga tacttagaaa aactaatgt gaacatttcc      480
catcttcato ttaacaatga gaatagtcac gcttcacaag ccaaagatgt gaaaactgct      540
gttcacatga aaacttgac agaaacagag ttttccaata aaaagaatca gattgatgag      600
aatcaggtaa ctgaagccac aaaaaatgac ctcttccttt ttgtgagcat taatgaaaga      660
cagcatacat tgtttaaata atacagagga aaacnggaat cattaaatga cattgtttcc      720
aggaaaaatg ntcagtgaan gacagctgga ggaatcacat tcatttcaca tagagcctct      780

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ggagatttag taacagancg ggaaggncna cctttgatct ttcacttcag ataaaaaact 840  
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 gtaaagatgc gaaccccaaa tcagtggttt gttcattctt catgcaagag caatgcacta 180  
 aaggagagaa gcaagctgtg gtgatcagtg actttggtga aagctaagaa ggttcaaaca 240  
 aatttgcaaa tgatatacaa cttctaagca ttccatattg gaagaagaga tttctacaca 300  
 tgaaaaaat gcctttgttt agtaaatac acaaaaatcc agcagaaatt gtgaaaatcc 360  
 tgaaagacaa tttggccatt ttggaaaagc aagacaaaaa gacagacaag gcttcagaag 420  
 aagtgtctaa atcactgcaa gcaatgaaag aaattctgtg tggtaaaaac gagaaagaac 480  
 cccaacaga agcagtggct cagctagcac aagaactcta cagcagtggc ctgctagtga 540  
 cactgatagc tgacctgcag ctgatagact ttgagggaaa aaaagatgtg acccagatat 600  
 ttaacaacat cttgagaaga cagataggca ctcgaggtcc tactgtggag tatattagt 660  
 ctcatcctca tatcctgttt atgctcctca aaggatatga agccccacag attgccttac 720  
 gttgtgggga ttatgctgag agaattgtatt cgacatgaac cccttgccaa aatcatcctc 780  
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 tcaaatgcct t 851

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 attgatcagg agttggaaca caataattcc cttgttagag aagaaaaaga gacaactgat 180  
 acaaggaaaa aatcacttct ttctgctgcc ttagctaaat caggtgaaag gctacaagct 240  
 ctaacacttc ttatgattca ctacagagca ggcattgaag atatagaaac tttagaaagt 300  
 ctgtcttttag accagcactc caaaaaata agcaagtaca cagatgatac agaagaagac 360  
 ctgataatg aaataagcca actaatagac tctcagccat tcagcagcat atcagatgac 420

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ttatttggcc catccgagtc tgtgtagcag acaggtctat ttaaactttc aaatgaacag 480  
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ttggatgaag tacagtccta ctcgaggagt aacaaaatga gtgtgcagaa cttggcaacg 180  
gtctttgggc ctaatatcct gcgccccaaa gtggaagatc ctttgactat catggagggc 240  
actgtggtgg tccagcagtt gatgtcagtg atgattagca aacatgattg cctctttccc 300  
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aagaaagcca ccatggggca gttacagaac aaggagaaca ataacaccaa ggacagccct 420  
agtaggcagt gtcctggga caagtctgag tcacccaga gaagcagcat gaacaatgga 480  
tccccacag ctctatcagg cagcaaaacc aacagcccaa agaacagtgt tcacaagcta 540  
gatgtgtcta gaagcccccc tctcatgggc aaaaagaacc cagcctttaa taagggtagt 600  
gggatagtta ccaatgggtc cttcagcagc agtaatgcag aaggtcttga gaaaacccaa 660  
accaccccca atgggagcct acaggccaga aggagctctt cactgaaggt atctggtacc 720  
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gggatacaag cagaagacag ctggagagta ggcacacaca gatgtccctt tgatatgtca 900  
tcacagt 907

<210> 102  
<211> 931  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (881)..(881)



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&lt;223&gt; n is a, c, g, or t

&lt;400&gt; 102

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cgagggcaca acaaggcggc gccgccgcag atcccggaca cccggcggga gctggcggag      60
ctcgtgaagc ggaagcagga gctggcggaa acattggcaa atttggagcg acagatctat      120
gcttttgagg gaagctacct ggaagacact cagatgtatg gcaatattat tcgtggctgg      180
gatcgggtatc tgaccaacca aaaaaactcc aatagcaaaa atgatcgaag gaaccggaag      240
tttaagggaag ctgagcggct cttcagtaaa tctcgggtta cctcagcagc tgcagtaagt      300
gcattggcag gagttcagga ccagctcatt gaaaagaggg agccaggaag tgggacggaa      360
agtgacactt ctccagactt ccacaatcag gaaaatgagc ccagccagga ggaccctgag      420
gatctggatg gatctgtgca gggagtgaag cctcagaagg ctgcttcttc tacttcctca      480
gggagtcacc acagcagcca taaaaagcga aagaataaaa accggcacag gattgatctg      540
aagttaaaca aaaaaccacg agctgactat tagaagacac attagtgcag aagcttccag      600
gctgtagagc cctgcttccc ttctctgacc tcacaaagat aaacatcctt cacctgagtt      660
cgtggccatc cacctctgct ctcccagacc cagtgcctgt gactttgagt agtttggtct      720
aaatgtggtg acaacaagt catttctgta agacattggg tcttacttta tgtcattttt      780
agtaacagaa ctgcaggaag atcaagacat gttgtaatcc cggcaagttg ctactgtgcg      840
ttctcccttc ttagatgatt gtctcccca aactggctggc ncagcttctc tgtgatacct      900
tcagaatggt ctctgggttg tttatgctga a                                931

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&lt;210&gt; 103

&lt;211&gt; 737

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (636)..(636)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (646)..(646)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (689)..(689)

&lt;223&gt; n is a, c, g, or t

&lt;400&gt; 103

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ggaagaacag catgctaaca catctgccaa ttatgatgtg gagctacttc atcacaaga      60
tgcacatgta gatttctga aaagtgggtga ttcgcatcta ggtggcggca gtcgagaagg      120

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ctcgttttaa gaaacaataa cattaaagtg gtgtacacca aggacaaata acattgaatt 180
acactattgt actggagctt atcggatttc acctgtagat gtaaatagta gaccttcctc 240
ctgccttact aattttcttc taaatggctg ttctgtttta ttggaacaac cacgaaagtc 300
aggttctaaa gtcattagtc atatgcttag tagccatgga ggagagattt ttttgcacgt 360
ccttagcagt tctcgatcca ttctagaaga tccaccttca attagtgaag gatgtggagg 420
aagagttaca gactaccggg attacagatt ttggtgaatt tatgaggga aacagattaa 480
ctccttttct agaccccgaga tataaaatcg atggaagtct tgaggccct ttgggaacga 540
gcaaaagatc agttagaaaa acatacccg tactggccta tgatcatttc acaaaccacc 600
atttttaaca tgcaagcggg agttccatta gccagngtta ttgtgnaaaa aatctctgac 660
agaagagaat gtgttaaact gtcaaaaanc atatacaact tagttgatat ggaaagaaaa 720
atgatcctct acctatt 737

```

&lt;210&gt; 104

&lt;211&gt; 770

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (141)..(141)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (640)..(641)

&lt;223&gt; n is a, c, g, or t

&lt;400&gt; 104

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cgaggactac ttgtacctac aagacctgct actcgccaag ggctgattgg gagaataatg 60
gaatctgaaa atatggattc tgaaaatatg aagacagaaa atatggaatc tcaaatgta 120
gactttgaga gtgtttcttc ngttacagct ctggaagccc tctctaagct acttaatcct 180
gaagaagagg atgattctga ctatggacag acaaatgggt tatctactat tggagccatg 240
ggtcctggga atattggacc accccaaata gaagagctca aagtcatccc tgaaaccagc 300
gaggaaaata atgaggacat ctggaattca gaagagattc cagaaggagc agaatatgat 360
gatatgtggg atgttagaga aatcccagag tatgagatta tattcagaca gcagggtggga 420
actgaagata tatttttagg gttgtcaaaa aaggactcct caacagggtg ttgcagtga 480
ctagtggcta aaattaaatt gccaaatata aacccttctg atattcaaat tgatatccag 540
ggaaacaatc cttgaccttc gtactcctca gaagaagctg ttgataactc ttctgagct 600
ggtggaatgt accagtgcc aagcattcta tatccagan nactgaaact cttgaaatca 660

```

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ctatgactat gaaaagagag ttagatattg ctaatttctt ctgaaactgc atgaaaaaga 720

taaaaagtag taaaatggca ttggtaacaa ttaaaaaact ttgaaaaaag 770

<210> 105

<211> 920

<212> DNA

<213> Homo sapiens

<220>

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<222> (687)..(687)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (750)..(750)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (807)..(807)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (810)..(810)

<223> n is a, c, g, or t

<220>

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<222> (826)..(827)

<223> n is a, c, g, or t

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<222> (849)..(849)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (870)..(870)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (874)..(874)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (882)..(882)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (889)..(889)

<223> n is a, c, g, or t

<220>

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<221> misc\_feature  
<222> (909)..(909)  
<223> n is a, c, g, or t

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tcgacttcga ggtgcgctcc cagtttgaag ggcgggcccat gcccagctc acctccatca 120  
tcgtcaacca gctcaagaag atcatcaagc gcaagcacac cctaccgaat tacaagatca 180  
ggtttaagcc gttttttcca taccagacct tgcaaggatt tgaagaagat gaagagcata 240  
tccatataca acaatgggca cttactgaag gccgtcttaa agttacgttg ttagaatgta 300  
gcaggttact catttttggga tcctatgaca gagaggcaaa tgttcattgc acacttgagt 360  
taagcagtag tgtttgggaa gaaaaacaga ggagttctat taagacgggt gaattaataa 420  
aaggaaattht acaaagtgtt ggacttacac ttcgtcttgt ccagtcaact gatgggtatg 480  
ctggggcacgt catcattgaa actgtggctc caaactcgcc tgctgcaatt gcagatcttc 540  
agcggggaga tcgacttatt gccattggga ggtgtgaaaa tcacatcaac actgcaagtg 600  
ttgaagctta tcaagcaggc tggtgaccga gtcctgggtg actatgaaag gcctgttggc 660  
cagagtaatc aaggtgcagt gctgcangat aactttggcc agttggaaga aaactttttg 720  
tcaagctcat gccaatcggg ttatgaagan gaaactgccg ggttgacagt aaatactgaa 780  
aagtaaagag ctgggattct gaatttngan aacttggcaa gtgganntcc agagcccaaa 840  
atgagttcna agatgaggca caatcattan gtcntagtcc cnaacgggnt ccaacaacac 900  
ttttctatna aaccccttgg 920

<210> 106  
<211> 938  
<212> DNA  
<213> Homo sapiens

<220>  
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<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (728)..(728)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (860)..(860)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (865)..(865)

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&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (867)..(867)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (874)..(874)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (876)..(876)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (882)..(882)

&lt;223&gt; n is a, c, g, or t

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (908)..(908)

&lt;223&gt; n is a, c, g, or t

&lt;400&gt; 106

ctgcagaggc gcctcatgga aaccaacctg tctaagctcc gaagcgggtcc ccgtgtccct	60
tgggcctcta agacgaacaa actcaatcag gctaagtctg aggggctaaa gaagtctgag	120
gaggatgaca tgatttttgt ttcttgccag tgtgctggaa aggatgtgaa agccttggtt	180
gacacaggct gcctatataa tctcatctct ttggcctgtg tggacagatt gggactcaag	240
gagcatgtca aatcccacaa gcatgaagga gaaaagcttt ctctaccccg gcatctcaaa	300
gtagtgggcc agattgagca cctagtgatc acactgggct cctccgcct ggactgccca	360
gcagctgtgg ttgatgacaa tgagaaaaac ttgtcccttg gtctacagac tctccgatct	420
ctgaagtgca tcataaactt ggataagcac cggctgatca tggggaagac agacaaggaa	480
gaaatccctt ttgtggagac agtctctttg aatgaagaca acacttcaga agcataacta	540
cagcctgcag catgtctgca cgtgtgcatg catacacacc gggttgacag attgagaaaa	600
ctgggtttga accaaatgcc gtagtgactt gctgtggacc aagtccttcc atctaataga	660
agctccaggg gctccttncc attcagacct ctctagacta tagtctatgc ttagagatct	720
tgtctggnta tggccattgt tttttactac tttgatcact taacttatag accttttttg	780
acactgccag tctcactggg ggctatttct ctgctccttc cagaatttgc ttttattagt	840
caagtatagg gctgccaggn tctgngnccc atananatat gngcttcttt cctaagctaa	900
tggataanaa caggacctga ctttttaaaaa aaaaaaaa	938

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<210> 107  
<211> 949  
<212> DNA  
<213> Homo sapiens

<220>  
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<222> (705)..(705)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (765)..(765)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (818)..(818)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (831)..(831)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (844)..(844)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (865)..(865)  
<223> n is a, c, g, or t

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<221> misc\_feature  
<222> (875)..(875)  
<223> n is a, c, g, or t

<220>  
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<222> (893)..(893)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (906)..(906)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (908)..(908)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (910)..(910)  
<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (918)..(918)
<223> n is a, c, g, or t

<400> 107
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tgagaacccat gcctttttta gtgtgtccta tttcatacct gtacacactt cctcgttttg      120
taatgagatt tacttacacc caaacagatc ctgaaagaaa gcttcaagtt ttctcagatg      180
atggatatgt tttcactgta ttcaataact gacggatgta aggtgcacgt ttcctgatgt      240
gacgcactgt attccagctg gtgatcaagt ctgggaacag ccgtaacagg tcaaccttgt      300
ggagccatcg cgagttagag ggtgaaagat ggcagaaaaa aaagtcttgt gtgtgagtgt      360
gttttttgag tttgcatcaa tcttaatgtc tcttcataat acttttataa tacattaagc      420
ctcttgtcta catatttgga gagaatatga ctttactagc agagaaatac aatatatctt      480
gtctactgga ctgtaaaata tatgtatgaa ataaaattag ttccatttgg tcttctagta      540
tattaaagtg ctatctgacg ttgttatcct gtttttgcaa aaaaaaaaaa aaaaaagtta      600
actacagacc attgtttcta ataagcagag agatctatct tagtagtaaa ctgaagggtt      660
agttgtgagc ttcagatctt gtgaactcca gatgttgtgc ggggnntttt tttttttttt      720
aagaccacca ctaaaaaatg ccaggaatat gtacctggga actgnagggg agctttcagt      780
attggaaaaa gattgttcta tacggacctt tttgctgntt atccgggatg naaaaagcct      840
tccnaaacct atgggaaaaa aaagngagca ctgantctcc cctgttcctt cgnggacctt      900
tttggnangn aaactggnet gtttttaaaa tgggactaaa aaaaaaaaaa      949

<210> 108
<211> 784
<212> DNA
<213> Homo sapiens

<400> 108
agaaggcttt ggcttctgat agtcatggac tcactaggct gctgaggaag atcaataata      60
cctactggaa tcagtcatga gaagtcaagc atggaaattg tgaattgtgt gtgtggccag      120
accagtacct ccaagtgttc agaagatgtg tgaccagaca aaacacagta aatgctgccc      180
agcaaaaggc aatcaatgct gccaccaca gcagaaccag tgctgccagt caaaaggcaa      240
tcaatgctgc ccacaaaaac agaaccagtg ctgccagcca aaaggcagtc aatgctgccc      300
accaaaacac aatcactgct gccagccaaa acccccatgc tgcattcagg ccagggtgctg      360
tggtttggag accaagcctg aagtctcacc ccttaacatg gagtctgagc ccaactcacc      420
gcaaactcag gacaagggtg gtcaaaccga gcagcagccc catagcccac aaaatgagtc      480

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caggccaagc aaatgagagc agaagaagtc aaacaaagaa gaagtccttg gggccatgcc      540
tttcactttg taggggtgggg gattactgag agtcaggcta gacctgtgtt tagagaagca      600
gttttcacag tgactaccat ttccacccaa tgagaggctc ctatttccca tcatagctcc      660
ctaccctagg gaggcctcca tctggaaatg ggaggatgaa gaggctagaa tcatctttcc      720
tagtgatcct gacatttaga cagcacagaa ataaagagca ataaaaagaa aaaaaaaaaa      780
aaaa                                                                 784

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<210> 109
<211> 294
<212> PRT
<213> Homo sapiens

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<220>
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<222> (242)..(243)
<223> Xaa can be any naturally occurring amino acid

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<220>
<221> misc_feature
<222> (289)..(289)
<223> Xaa can be any naturally occurring amino acid

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<400> 109

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Arg Gly Lys Gly Val Thr Pro Ala Gly Phe Pro Lys Lys Ala Ser Arg
1           5           10           15
Thr Ala Arg Ile Ala Ser Asp Glu Glu Ile Gln Gly Thr Lys Asp Ala
20          25          30
Val Ile Gln Asp Leu Glu Arg Lys Leu Arg Phe Lys Glu Asp Leu Leu
35          40          45
Asn Asn Gly Gln Pro Arg Leu Thr Tyr Glu Glu Arg Met Ala Arg Arg
50          55          60
Leu Leu Gly Ala Asp Ser Ala Thr Val Phe Asn Ile Gln Glu Pro Glu
65          70          75          80
Glu Glu Thr Ala Asn Gln Glu Tyr Lys Val Ser Ser Cys Glu Gln Arg
85          90          95
Leu Ile Ser Glu Ile Glu Tyr Arg Leu Glu Arg Ser Pro Val Asp Glu
100         105         110
Ser Gly Asp Glu Val Gln Tyr Gly Asp Val Pro Val Glu Asn Gly Met
115         120         125
Ala Pro Phe Phe Glu Met Lys Leu Lys His Tyr Lys Ile Phe Glu Gly
130         135         140
Met Pro Val Thr Phe Thr Cys Arg Val Ala Gly Asn Pro Lys Pro Lys
145         150         155         160
Ile Tyr Trp Phe Lys Asp Gly Lys Gln Ile Ser Pro Lys Ser Asp His

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	165		170		175
Tyr Thr Ile Gln Arg Asp Leu Asp Gly Thr Cys Ser Leu His Thr Thr	180		185		190
Ala Ser Thr Leu Asp Asp Asp Gly Asn Tyr Thr Ile Met Ala Ala Asn	195		200		205
Pro Gln Gly Arg Ile Ser Cys Thr Gly Arg Leu Met Val Gln Ala Val	210		215		220
Asn Gln Arg Gly Arg Ser Pro Arg Ser Pro Ser Gly His Pro His Val	225		230		235
Arg Xaa Xaa Arg Ser Arg Ser Arg Asp Ser Gly Asp Glu Asn Asp Pro	245		250		255
Ile Gln Glu Arg Phe Phe Arg Pro His Phe Leu Gln Ala Pro Gly Asp	260		265		270
Leu Thr Gly Gln Glu Gly Asn Ser Ala Asp Gly Leu Gln Ser Gln Trp	275		280		285
Xaa Thr Thr Pro Asp Leu	290				
<210> 110					
<211> 226					
<212> PRT					
<213> Homo sapiens					
<400> 110					
Arg Gly Glu Ile Thr Asn Ser Asp Gln Thr Lys Ala Asp Leu Asp Ser	1	5	10		15
Ser Leu Asp Ile Lys Lys Asn Pro Val Pro Cys Gln Lys Tyr Ser Leu	20		25		30
Arg Asn Ser Ser Asn Val Met Leu Asp Asp Lys Gln Cys Lys Ile Lys	35		40		45
Gln Ile Gln Leu Leu Thr Lys Lys Ser Glu Cys Ser Ile Leu Leu Ser	50		55		60
Lys Gln Thr Ser Asp Phe Leu Gln Val Cys Asn Asp Thr Leu Glu Lys	65	70	75		80
Ser Glu Leu Thr Val Pro Cys Asp Ile Val Ile Asp His His Val Ser	85		90		95
Tyr Ala Ala Phe Ser Ala Asn Ser Lys Leu Leu Leu Lys Asn Ser Asp	100		105		110
Lys Asn Val His Ser Met Ser Met Leu Val Lys Pro Asn Ser Ser Pro	115		120		125
Gly Gly Lys Thr Met Cys Lys Asn Met Ser Asp Met Gln Asn Ser Gln	130		135		140

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Phe Asn Asn Cys Leu Gly Tyr Leu Glu Asn Thr Asn Val Asn Ile Ser  
 145 150 155 160

His Leu His Leu Asn Asn Glu Asn Ser His Ala Ser Gln Ala Lys Asp  
 165 170 175

Val Lys Thr Ala Val His Met Lys Thr Cys Thr Glu Thr Glu Phe Ser  
 180 185 190

Asn Lys Lys Asn Gln Ile Asp Glu Asn Gln Val Thr Glu Ala Thr Lys  
 195 200 205 -

Asn Asp Leu Phe Leu Phe Val Ser Ile Asn Glu Arg Gln His Thr Leu  
 210 215 220

Phe Lys  
 225

<210> 111  
 <211> 74  
 <212> PRT  
 <213> Homo sapiens

<400> 111

Arg Gly Ser Arg Gly Arg His His Trp Ser Gly Gly Ala Ala Val Ser  
 1 5 10 15

Ser Gly Tyr Pro Ser Asn Ile Glu Lys Lys Glu Tyr Gln Glu Gln Ser  
 20 25 30

Val Leu Ser Cys Cys Ser Glu Arg Lys Asp Ala Asn Pro Lys Ser Val  
 35 40 45

Val Cys Ser Phe Phe Met Gln Glu Gln Cys Thr Lys Gly Glu Lys Gln  
 50 55 60

Ala Val Val Ile Ser Asp Phe Gly Glu Ser  
 65 70

<210> 112  
 <211> 148  
 <212> PRT  
 <213> Homo sapiens

<400> 112

Arg Gly Asp Asp Ser Val Phe Ile Ala Val Lys Glu Ile Gly Arg Asp  
 1 5 10 15

Leu Tyr Arg Gly Leu Pro Thr Glu Glu Arg Ile Gln Lys Leu Glu Phe  
 20 25 30

Met Leu Asp Lys Leu Gln Asn Glu Ile Asp Gln Glu Leu Glu His Asn  
 35 40 45

Asn Ser Leu Val Arg Glu Glu Lys Glu Thr Thr Asp Thr Arg Lys Lys  
 50 55 60

Ser Leu Leu Ser Ala Ala Leu Ala Lys Ser Gly Glu Arg Leu Gln Ala

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65              70              75              80
Leu Thr Leu Leu Met Ile His Tyr Arg Ala Gly Ile Glu Asp Ile Glu
      85              90              95

Thr Leu Glu Ser Leu Ser Leu Asp Gln His Ser Lys Lys Ile Ser Lys
      100              105              110

Tyr Thr Asp Asp Thr Glu Glu Asp Leu Asp Asn Glu Ile Ser Gln Leu
      115              120              125

Ile Asp Ser Gln Pro Phe Ser Ser Ile Ser Asp Asp Leu Phe Gly Pro
      130              135              140

Ser Glu Ser Val
145

<210> 113
<211> 279
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<222> (266)..(266)
<223> Xaa can be any naturally occurring amino acid

<400> 113

Arg Gly Ser Cys Ala Lys Leu Leu Ser Lys Glu Glu Glu Ala Gly Val
1      5              10              15

Lys Glu Leu Ala Lys Gln Val Lys Ser Leu Pro Val Val Asn Tyr Asn
      20              25              30

Leu Leu Lys Tyr Ile Cys Arg Phe Leu Asp Glu Val Gln Ser Tyr Ser
      35              40              45

Gly Val Asn Lys Met Ser Val Gln Asn Leu Ala Thr Val Phe Gly Pro
      50              55              60

Asn Ile Leu Arg Pro Lys Val Glu Asp Pro Leu Thr Ile Met Glu Gly
65      70              75              80

Thr Val Val Val Gln Gln Leu Met Ser Val Met Ile Ser Lys His Asp
      85              90              95

Cys Leu Phe Pro Lys Asp Ala Glu Leu Gln Ser Lys Pro Gln Asp Gly
      100              105              110

Val Ser Asn Asn Asn Glu Ile Gln Lys Lys Ala Thr Met Gly Gln Leu
      115              120              125

Gln Asn Lys Glu Asn Asn Asn Thr Lys Asp Ser Pro Ser Arg Gln Cys
      130              135              140

Ser Trp Asp Lys Ser Glu Ser Pro Gln Arg Ser Ser Met Asn Asn Gly
145      150              155              160

Ser Pro Thr Ala Leu Ser Gly Ser Lys Thr Asn Ser Pro Lys Asn Ser

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165	170	175
Val His Lys Leu Asp Val Ser Arg Ser Pro Pro Leu Met Val Lys Lys		
180	185	190
Asn Pro Ala Phe Asn Lys Gly Ser Gly Ile Val Thr Asn Gly Ser Phe		
195	200	205
Ser Ser Ser Asn Ala Glu Gly Leu Glu Lys Thr Gln Thr Thr Pro Asn		
210	215	220
Gly Ser Leu Gln Ala Arg Arg Ser Ser Ser Leu Lys Val Ser Gly Thr		
225	230	235
Lys Met Gly Thr His Ser Val Gln Asn Gly Thr Val Arg Met Gly Ile		
245	250	255
Leu Asn Ser Asp Thr Leu Gly Asn Pro Xaa Met Phe Glu His Glu Leu		
260	265	270
Ala Ala Asn Gly Tyr Val Thr		
275		
<210> 114		
<211> 190		
<212> PRT		
<213> Homo sapiens		
<400> 114		
Arg Gly His Asn Lys Ala Ala Pro Pro Gln Ile Pro Asp Thr Arg Arg		
1	5	10
Glu Leu Ala Glu Leu Val Lys Arg Lys Gln Glu Leu Ala Glu Thr Leu		
20	25	30
Ala Asn Leu Glu Arg Gln Ile Tyr Ala Phe Glu Gly Ser Tyr Leu Glu		
35	40	45
Asp Thr Gln Met Tyr Gly Asn Ile Ile Arg Gly Trp Asp Arg Tyr Leu		
50	55	60
Thr Asn Gln Lys Asn Ser Asn Ser Lys Asn Asp Arg Arg Asn Arg Lys		
65	70	75
Phe Lys Glu Ala Glu Arg Leu Phe Ser Lys Ser Ser Val Thr Ser Ala		
85	90	95
Ala Ala Val Ser Ala Leu Ala Gly Val Gln Asp Gln Leu Ile Glu Lys		
100	105	110
Arg Glu Pro Gly Ser Gly Thr Glu Ser Asp Thr Ser Pro Asp Phe His		
115	120	125
Asn Gln Glu Asn Glu Pro Ser Gln Glu Asp Pro Glu Asp Leu Asp Gly		
130	135	140
Ser Val Gln Gly Val Lys Pro Gln Lys Ala Ala Ser Ser Thr Ser Ser		
145	150	155
		160

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Gly Ser His His Ser Ser His Lys Lys Arg Lys Asn Lys Asn Arg His  
 165 170 175

Arg Ile Asp Leu Lys Leu Asn Lys Lys Pro Arg Ala Asp Tyr  
 180 185 190

<210> 115  
 <211> 151  
 <212> PRT  
 <213> Homo sapiens

<400> 115

Glu Glu Gln His Ala Asn Thr Ser Ala Asn Tyr Asp Val Glu Leu Leu  
 1 5 10 15

His His Lys Asp Ala His Val Asp Phe Leu Lys Ser Gly Asp Ser His  
 20 25 30

Leu Gly Gly Gly Ser Arg Glu Gly Ser Phe Lys Glu Thr Ile Thr Leu  
 35 40 45

Lys Trp Cys Thr Pro Arg Thr Asn Asn Ile Glu Leu His Tyr Cys Thr  
 50 55 60

Gly Ala Tyr Arg Ile Ser Pro Val Asp Val Asn Ser Arg Pro Ser Ser  
 65 70 75 80

Cys Leu Thr Asn Phe Leu Leu Asn Gly Arg Ser Val Leu Leu Glu Gln  
 85 90 95

Pro Arg Lys Ser Gly Ser Lys Val Ile Ser His Met Leu Ser Ser His  
 100 105 110

Gly Gly Glu Ile Phe Leu His Val Leu Ser Ser Ser Arg Ser Ile Leu  
 115 120 125

Glu Asp Pro Pro Ser Ile Ser Glu Gly Cys Gly Gly Arg Val Thr Asp  
 130 135 140

Tyr Arg Asp Tyr Arg Phe Trp  
 145 150

<210> 116  
 <211> 184  
 <212> PRT  
 <213> Homo sapiens

<400> 116

Arg Gly Leu Leu Val Pro Thr Arg Pro Ala Thr Arg Gln Gly Leu Ile  
 1 5 10 15

Gly Arg Ile Met Glu Ser Glu Asn Met Asp Ser Glu Asn Met Lys Thr  
 20 25 30

Glu Asn Met Glu Ser Gln Asn Val Asp Phe Glu Ser Val Ser Ser Val  
 35 40 45

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Thr Ala Leu Glu Ala Leu Ser Lys Leu Leu Asn Pro Glu Glu Glu Asp  
 50 55 60  
 Asp Ser Asp Tyr Gly Gln Thr Asn Gly Leu Ser Thr Ile Gly Ala Met  
 65 70 75 80  
 Gly Pro Gly Asn Ile Gly Pro Pro Gln Ile Glu Glu Leu Lys Val Ile  
 85 90 95  
 Pro Glu Thr Ser Glu Glu Asn Asn Glu Asp Ile Trp Asn Ser Glu Glu  
 100 105 110  
 Ile Pro Glu Gly Ala Glu Tyr Asp Asp Met Trp Asp Val Arg Glu Ile  
 115 120 125  
 Pro Glu Tyr Glu Ile Ile Phe Arg Gln Gln Val Gly Thr Glu Asp Ile  
 130 135 140  
 Phe Leu Gly Leu Ser Lys Lys Asp Ser Ser Thr Gly Cys Cys Ser Glu  
 145 150 155 160  
 Leu Val Ala Lys Ile Lys Leu Pro Asn Thr Asn Pro Ser Asp Ile Gln  
 165 170 175  
 Ile Asp Ile Gln Gly Asn Asn Pro  
 180

<210> 117  
 <211> 207  
 <212> PRT  
 <213> Homo sapiens

<400> 117

Gly Phe Thr Arg Val Pro Phe Thr His Trp Phe Phe Ser Phe Val Glu  
 1 5 10 15  
 Asp Pro Leu Ile Asp Phe Glu Val Arg Ser Gln Phe Glu Gly Arg Pro  
 20 25 30  
 Met Pro Gln Leu Thr Ser Ile Ile Val Asn Gln Leu Lys Lys Ile Ile  
 35 40 45  
 Lys Arg Lys His Thr Leu Pro Asn Tyr Lys Ile Arg Phe Lys Pro Phe  
 50 55 60  
 Phe Pro Tyr Gln Thr Leu Gln Gly Phe Glu Glu Asp Glu Glu His Ile  
 65 70 75 80  
 His Ile Gln Gln Trp Ala Leu Thr Glu Gly Arg Leu Lys Val Thr Leu  
 85 90 95  
 Leu Glu Cys Ser Arg Leu Leu Ile Phe Gly Ser Tyr Asp Arg Glu Ala  
 100 105 110  
 Asn Val His Cys Thr Leu Glu Leu Ser Ser Ser Val Trp Glu Glu Lys  
 115 120 125  
 Gln Arg Ser Ser Ile Lys Thr Val Glu Leu Ile Lys Gly Asn Leu Gln  
 130 135 140

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Ser Val Gly Leu Thr Leu Arg Leu Val Gln Ser Thr Asp Gly Tyr Ala  
 145 150 155 160

Gly His Val Ile Ile Glu Thr Val Ala Pro Asn Ser Pro Ala Ala Ile  
 165 170 175

Ala Asp Leu Gln Arg Gly Asp Arg Leu Ile Ala Ile Gly Arg Cys Glu  
 180 185 190

Asn His Ile Asn Thr Ala Ser Val Glu Ala Tyr Gln Ala Gly Trp  
 195 200 205

<210> 118

<211> 178

<212> PRT

<213> Homo sapiens

<400> 118

Leu Gln Arg Arg Leu Met Glu Thr Asn Leu Ser Lys Leu Arg Ser Gly  
 1 5 10 15

Pro Arg Val Pro Trp Ala Ser Lys Thr Asn Lys Leu Asn Gln Ala Lys  
 20 25 30

Ser Glu Gly Leu Lys Lys Ser Glu Glu Asp Asp Met Ile Leu Val Ser  
 35 40 45

Cys Gln Cys Ala Gly Lys Asp Val Lys Ala Leu Val Asp Thr Gly Cys  
 50 55 60

Leu Tyr Asn Leu Ile Ser Leu Ala Cys Val Asp Arg Leu Gly Leu Lys  
 65 70 75 80

Glu His Val Lys Ser His Lys His Glu Gly Glu Lys Leu Ser Leu Pro  
 85 90 95

Arg His Leu Lys Val Val Gly Gln Ile Glu His Leu Val Ile Thr Leu  
 100 105 110

Gly Ser Leu Arg Leu Asp Cys Pro Ala Ala Val Val Asp Asp Asn Glu  
 115 120 125

Lys Asn Leu Ser Leu Gly Leu Gln Thr Leu Arg Ser Leu Lys Cys Ile  
 130 135 140

Ile Asn Leu Asp Lys His Arg Leu Ile Met Gly Lys Thr Asp Lys Glu  
 145 150 155 160

Glu Ile Pro Phe Val Glu Thr Val Ser Leu Asn Glu Asp Asn Thr Ser  
 165 170 175

Glu Ala

<210> 119

<211> 69

<212> PRT

<213> Homo sapiens

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&lt;400&gt; 119

Arg Gly Trp Cys Leu Ser Asp Thr His Arg Pro Pro Val Thr Ser His  
 1 5 10 15  
 Thr Pro His Val Arg Thr Met Pro Phe Leu Val Cys Pro Ile Ser Tyr  
 20 25 30  
 Leu Tyr Thr Leu Pro Arg Phe Val Met Arg Phe Thr Tyr Thr Gln Thr  
 35 40 45  
 Asp Pro Glu Arg Lys Leu Gln Val Phe Ser Asp Asp Gly Tyr Val Phe  
 50 55 60  
 Thr Val Phe Asn Asn  
 65

&lt;210&gt; 120

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 120

Met Cys Asp Gln Thr Lys His Ser Lys Cys Cys Pro Ala Lys Gly Asn  
 1 5 10 15  
 Gln Cys Cys Pro Pro Gln Gln Asn Gln Cys Cys Gln Ser Lys Gly Asn  
 20 25 30  
 Gln Cys Cys Pro Pro Lys Gln Asn Gln Cys Cys Gln Pro Lys Gly Ser  
 35 40 45  
 Gln Cys Cys Pro Pro Lys His Asn His Cys Cys Gln Pro Lys Pro Pro  
 50 55 60  
 Cys Cys Ile Gln Ala Arg Cys Cys Gly Leu Glu Thr Lys Pro Glu Val  
 65 70 75 80  
 Ser Pro Leu Asn Met Glu Ser Glu Pro Asn Ser Pro Gln Thr Gln Asp  
 85 90 95  
 Lys Gly Cys Gln Thr Gln Gln Gln Pro His Ser Pro Gln Asn Glu Ser  
 100 105 110  
 Arg Pro Ser Lys  
 115

&lt;210&gt; 121

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 121

atgcgggtca gcaaaccctt tgggatgctc atgctctcca tttggatcct gctgttcgtg 60  
 tgctactacc tgtcctacta cctgtgctcc gggtcctcat attttgtgct tgcaaattgga 120  
 catatcctgc ccaacagtga aaatgctcat ggccaatctc tggaagaaga ttccgcattg 180



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gaagctttgc tgaatttttt ctttccaaca acttgcaatc tgagggaaaa tcaggtggca 240  
 aagccttgta atgagctgca agatccttagt gagagtgaat gtttgagaca caaatgctgt 300  
 ttttcatcat cggggaccac gagcttcaaa tgttttgctc catttagaga tgtgcctaaa 360  
 cagatgatgc aa 372

<210> 122  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 122

Met Arg Val Ser Lys Pro Phe Gly Met Leu Met Leu Ser Ile Trp Ile  
 1 5 10 15  
 Leu Leu Phe Val Cys Tyr Tyr Leu Ser Tyr Tyr Leu Cys Ser Gly Ser  
 20 25 30  
 Ser Tyr Phe Val Leu Ala Asn Gly His Ile Leu Pro Asn Ser Glu Asn  
 35 40 45  
 Ala His Gly Gln Ser Leu Glu Glu Asp Ser Ala Leu Glu Ala Leu Leu  
 50 55 60  
 Asn Phe Phe Phe Pro Thr Thr Cys Asn Leu Arg Glu Asn Gln Val Ala  
 65 70 75 80  
 Lys Pro Cys Asn Glu Leu Gln Asp Leu Ser Glu Ser Glu Cys Leu Arg  
 85 90 95  
 His Lys Cys Cys Phe Ser Ser Ser Gly Thr Thr Ser Phe Lys Cys Phe  
 100 105 110  
 Ala Pro Phe Arg Asp Val Pro Lys Gln Met Met Gln  
 115 120

<210> 123  
 <211> 129  
 <212> DNA  
 <213> Homo sapiens

<400> 123

acttgcaatc tgagggaaaa tcaggtggca aagccttgta atgagctgca agatccttagt 60  
 gagagtgaat gtttgagaca caaatgctgt ttttcatcat cggggaccac gagcttcaaa 120  
 tgttttgct 129

<210> 124  
 <211> 43  
 <212> PRT  
 <213> Homo sapiens

<400> 124

Thr Cys Asn Leu Arg Glu Asn Gln Val Ala Lys Pro Cys Asn Glu Leu

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1                      5                      10                      15  
 Gln Asp Leu Ser Glu Ser Glu Cys Leu Arg His Lys Cys Cys Phe Ser  
                     20                      25                      30

Ser Ser Gly Thr Thr Ser Phe Lys Cys Phe Ala  
                     35                      40

<210> 125  
 <211> 30  
 <212> DNA  
 <213> Homo sapiens

<400> 125  
 aagaaacaaa gaaggaagcg aaagaggaag 30

<210> 126  
 <211> 10  
 <212> PRT  
 <213> Homo sapiens

<400> 126

Lys Lys Gln Arg Arg Lys Arg Lys Arg Lys  
 1                      5                      10

<210> 127  
 <211> 75  
 <212> DNA  
 <213> Homo sapiens

<400> 127  
 atgcggggtca gcaaaccctt tgggatgctc atgctctcca tttggatcct gctgttcgtg 60

tgctactacc tgtcc 75

<210> 128  
 <211> 25  
 <212> PRT  
 <213> Homo sapiens

<400> 128

Met Arg Val Ser Lys Pro Phe Gly Met Leu Met Leu Ser Ile Trp Ile  
 1                      5                      10                      15

Leu Leu Phe Val Cys Tyr Tyr Leu Ser  
                     20                      25

<210> 129  
 <211> 69  
 <212> DNA  
 <213> Homo sapiens

<400> 129  
 atgtttgggc ttggtgcat cagccttatc ctggtatgtc tgcccattta ttgccgctct 60

cttttctgg 69

<210> 130

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<211> 23  
 <212> PRT  
 <213> Homo sapiens

<400> 130

Met Phe Gly Leu Gly Ala Ile Ser Leu Ile Leu Val Cys Leu Pro Ile  
 1 5 10 15

Tyr Cys Arg Ser Leu Phe Trp  
 20

<210> 131  
 <211> 582  
 <212> DNA  
 <213> Homo sapiens

<400> 131

atgcgggtca gcaaaccctt tgggatgctc atgctctcca tttggatcct gctgttcgtg 60  
 tgctactacc tgtcctacta cctgtgctcc gggtcctcat attttgtgct tgcaaattgga 120  
 catatcctgc ccaacagtga aaatgctcat ggccaatctc tggaagaaga ttccgcattg 180  
 gaagctttgc tgaatttttt ctttccaaca acttgcaatc tgagggaaaa tcaggtggca 240  
 aagccttgta atgagctgca agatcttagt gagagtgaat gtttgagaca caaatgctgt 300  
 ttttcatcat cggggaccac gagcttcaaa tgttttgctc catttagaga tgtgcctaaa 360  
 cagatgatgc aaatgtttgg gcttggtgcg atcagcctta tcctggtatg tctgcccatt 420  
 tattgccgct ctcttttctg gaggagcgaa ccggccgatg atttaciaag gcaggacaac 480  
 agagttgtaa cggggttgaa gaaacaaaga aggaagcgaa agaggaagtc tgaaatgtta 540  
 cagaaagcag caagaggacg tgaggaacat ggtgacgagc tc 582

<210> 132  
 <211> 193  
 <212> PRT  
 <213> Homo sapiens

<400> 132

Met Arg Val Ser Lys Pro Phe Gly Met Leu Met Leu Ser Ile Trp Ile  
 1 5 10 15

Leu Leu Phe Val Cys Tyr Tyr Leu Ser Tyr Tyr Leu Cys Ser Gly Ser  
 20 25 30

Ser Tyr Phe Val Leu Ala Asn Gly His Ile Leu Pro Asn Ser Glu Asn  
 35 40 45

Ala His Gly Gln Ser Leu Glu Glu Asp Ser Ala Leu Glu Ala Leu Leu  
 50 55 60

Asn Phe Phe Phe Pro Thr Thr Cys Asn Leu Arg Glu Asn Gln Val Ala  
 65 70 75 80

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Lys Pro Cys Asn Glu Leu Gln Asp Leu Ser Glu Ser Glu Cys Leu Arg  
                     85                    90                    95  
 His Lys Cys Cys Phe Ser Ser Ser Gly Thr Thr Ser Phe Lys Cys Phe  
                     100                    105                    110  
 Ala Pro Phe Arg Asp Val Pro Lys Gln Met Met Gln Met Phe Gly Leu  
                     115                    120                    125  
 Gly Ala Ile Ser Leu Ile Leu Val Cys Leu Pro Ile Tyr Cys Arg Ser  
                     130                    135                    140  
 Leu Phe Trp Arg Ser Glu Pro Ala Asp Asp Leu Gln Arg Gln Asp Asn  
                     145                    150                    155                    160  
 Arg Val Val Thr Gly Leu Lys Lys Gln Arg Arg Lys Arg Lys Arg Lys  
                     165                    170                    175  
 Ser Glu Met Leu Gln Lys Ala Ala Arg Gly Arg Glu Glu His Gly Asp  
                     180                    185                    190  
 Glu

<210> 133  
 <211> 717  
 <212> DNA  
 <213> Mus musculus

<400> 133  
 atgccttcg atcgaaggcc aagtcagaga aggaatagat ctaagagccg tgattatcgt 60  
 ggtgcacggt caaaggtaac aagagctgat acgaggaaca gagacgatac tcttgccctc 120  
 agtatgtatc aggggcctcc gagtgccgac caggggaaca acatggcgga tgcccctcgg 180  
 tttggcttct ggacttcagt aagccaatgt ctgcaatact tgtgggccag gaggcacttg 240  
 ggcttgcttc tacttttatt ctggacgctg gtgatcctgt tccgtcctgt gaacactgcg 300  
 aaattgcccc ttcttgctga agctgcagaa cttgaacccc ctttgggaaa tatgttggac 360  
 tttttctttc caacagcctg catcataagg gacaaccagg tgggtggtggc atgtaataac 420  
 cagccgtatc ttagcgagag tgaatgttta aaatccaagt gctgttcttc aacatctggg 480  
 actataatca aatgctatgc ccagtaagg gacaagccta cacaggtgct acgggtgttt 540  
 ggcttgctg cgatcagcat tctagtcctg ggatttctgc ctatgtgctg ctgctccatg 600  
 tgctggagga ggaagaggat gaacaggatg ttgaaggttt tgaagaaaca gaaatcaaaa 660  
 gggaagaagc ctaaaggaag gaaggcgtca gaagagagag ctttactgtc ccattga 717

<210> 134  
 <211> 238  
 <212> PRT  
 <213> Mus musculus

<400> 134

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Met Pro Ser Asp Arg Arg Pro Ser Gln Arg Arg Asn Arg Ser Lys Ser  
 1 5 10 15  
 Arg Asp Tyr Arg Gly Ala Arg Ser Lys Val Thr Arg Ala Asp Thr Arg  
 20 25 30  
 Asn Arg Asp Asp Thr Leu Ala Leu Ser Met Tyr Gln Gly Pro Pro Ser  
 35 40 45  
 Ala Asp Gln Gly Asn Asn Met Ala Asp Ala Pro Arg Phe Gly Phe Trp  
 50 55 60  
 Thr Ser Val Ser Gln Cys Leu Gln Tyr Leu Trp Ala Arg Arg His Leu  
 65 70 75 80  
 Gly Leu Leu Leu Leu Leu Phe Trp Thr Leu Val Ile Leu Phe Arg Pro  
 85 90 95  
 Val Asn Thr Ala Lys Leu Pro Ile Leu Ala Glu Ala Ala Glu Leu Glu  
 100 105 110  
 Pro Pro Leu Gly Asn Met Leu Asp Phe Phe Phe Pro Thr Ala Cys Ile  
 115 120 125  
 Ile Arg Asp Asn Gln Val Val Val Ala Cys Asn Asn Gln Pro Tyr Leu  
 130 135 140  
 Ser Glu Ser Glu Cys Leu Lys Ser Lys Cys Cys Ser Ser Thr Ser Gly  
 145 150 155 160  
 Thr Ile Ile Lys Cys Tyr Ala Pro Val Arg Asp Lys Pro Thr Gln Val  
 165 170 175  
 Leu Arg Val Phe Gly Leu Ala Ala Ile Ser Ile Leu Val Leu Gly Phe  
 180 185 190  
 Leu Pro Met Cys Cys Cys Ser Met Cys Trp Arg Arg Lys Arg Met Asn  
 195 200 205  
 Arg Met Leu Lys Val Leu Lys Lys Gln Lys Ser Lys Gly Lys Lys Pro  
 210 215 220  
 Lys Gly Arg Lys Ala Ser Glu Glu Arg Ala Leu Leu Ser His  
 225 230 235

&lt;210&gt; 135

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 135

cccggagcac gtcgaggtct ac

22

&lt;210&gt; 136

&lt;211&gt; 19

&lt;212&gt; DNA

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<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 136  
ggtgaggggc ccaggaagc 19

<210> 137  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 137  
cacaatgtat cctggtgaaa g 21

<210> 138  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 138  
gagatgatac attcttccag 20

<210> 139  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 139  
cttccgcaa ctctctctac c 21

<210> 140  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 140  
gatgcccggtg tcttgtcctt 20

<210> 141  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

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<400> 141  
cactaggctg ctgaggaaga t 21

<210> 142  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 142  
gttttggtgg gcagcattga g 21

<210> 143  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 143  
ggaccacccc aaatagaa 18

<210> 144  
<211> 17  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 144  
ccaccagctc aggaaga 17

<210> 145  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 145  
tctgatggag cggtaggatg c 21

<210> 146  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 146  
gtgtgcctcg gcttctttct tc 22

<210> 147  
<211> 20

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<212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 147  
 tgggtgcgatac agccttatcc 20

<210> 148  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 148  
 cggttcgctc ctccagaa 18

<210> 149  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 149  
 tgtctgccca tttattgccg ctctct 26

<210> 150  
 <211> 795  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide

<400> 150  
 catatgtctt cacataggag gaaagcgaag gggaggaata ggagaagtca ccgtgccatg 60  
 cgtgtggctc acttagagct ggcaacttat gagttggcgg caactgagtc gaatcccagag 120  
 agcagccatc ctggatacga ggccgccatg gctgacaggc ctccagccagg atggcgggaa 180  
 tctctaaaga tgcggggtcag caaacctttt gggatgctca tgctctccat ttggatcctg 240  
 ctgttcgtgt gctactacct gtccactac ctgtgctccg ggtccctcata ttttgtgctt 300  
 gcaaattggac atatcctgcc caacagtga aatgctcatg gccaatctct ggaagaagat 360  
 tccgcattgg aagctttgct gaattttttt tttccaacaa cttgcaatct gagggaaaat 420  
 caggtggcaa agccttgtaa tgagctgcaa gatcttagtg agagtgaatg tttgagacac 480  
 aaatgctgtt tttcatcacc ggggaccacg agcttcaa atgtttgctcc atttagagat 540  
 gtgcctaaac agatgatgca aatgtttggg cttgggtgca tcagccttat cctgggtatgt 600



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ctgcccattt attgccgctc tcttttctgg aggagcgaac cggccgatga ttacaaagg 660  
 caggacaaca gagttgtaac gggtttgaag aaacaaagaa ggaagcgaaa gaggaagtct 720  
 gaaatgttac agaaagcagc aagaggacgt gaggaacatg gtgacgagct cgagcaccac 780  
 caccaccacc actga 795

&lt;210&gt; 151

&lt;211&gt; 263

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Polypeptide

&lt;400&gt; 151

Met Ser Ser His Arg Arg Lys Ala Lys Gly Arg Asn Arg Arg Ser His  
 1 5 10 15  
 Arg Ala Met Arg Val Ala His Leu Glu Leu Ala Thr Tyr Glu Leu Ala  
 20 25 30  
 Ala Thr Glu Ser Asn Pro Glu Ser Ser His Pro Gly Tyr Glu Ala Ala  
 35 40 45  
 Met Ala Asp Arg Pro Gln Pro Gly Trp Arg Glu Ser Leu Lys Met Arg  
 50 55 60  
 Val Ser Lys Pro Phe Gly Met Leu Met Leu Ser Ile Trp Ile Leu Leu  
 65 70 75 80  
 Phe Val Cys Tyr Tyr Leu Ser Tyr Tyr Leu Cys Ser Gly Ser Ser Tyr  
 85 90 95  
 Phe Val Leu Ala Asn Gly His Ile Leu Pro Asn Ser Glu Asn Ala His  
 100 105 110  
 Gly Gln Ser Leu Glu Glu Asp Ser Ala Leu Glu Ala Leu Leu Asn Phe  
 115 120 125  
 Phe Phe Pro Thr Thr Cys Asn Leu Arg Glu Asn Gln Val Ala Lys Pro  
 130 135 140  
 Cys Asn Glu Leu Gln Asp Leu Ser Glu Ser Glu Cys Leu Arg His Lys  
 145 150 155 160  
 Cys Cys Phe Ser Ser Ser Gly Thr Thr Ser Phe Lys Cys Phe Ala Pro  
 165 170 175  
 Phe Arg Asp Val Pro Lys Gln Met Met Gln Met Phe Gly Leu Gly Ala  
 180 185 190  
 Ile Ser Leu Ile Leu Val Cys Leu Pro Ile Tyr Cys Arg Ser Leu Phe  
 195 200 205  
 Trp Arg Ser Glu Pro Ala Asp Asp Leu Gln Arg Gln Asp Asn Arg Val  
 210 215 220

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Val Thr Gly Leu Lys Lys Gln Arg Arg Lys Arg Lys Arg Lys Ser Glu  
225 230 235 240

Met Leu Gln Lys Ala Ala Arg Gly Arg Glu Glu His Gly Asp Glu Leu  
245 250 255

Glu His His His His His His  
260

<210> 152  
<211> 609  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 152  
catatgcggg tcagcaaacc ctttgggatg ctcattgctct ccatttggat cctgctgttc 60  
gtgtgctact acctgtccta ctacctgtgc tccgggtcct catattttgt gcttgcaaat 120  
ggacatatcc tgcccaacag tgaaaatgct catggccaat ctctggaaga agattccgca 180  
ttggaagctt tgctgaattt tttctttcca acaacttgca atctgagga aaatcaggtg 240  
gcaaagcctt gtaatgagct gcaagatcct agtgagagt aatgtttgag acacaaatgc 300  
tgtttttcat catcggggac cagcagcttc aaatgttttg ctccatttag agatgtgcct 360  
aaacagatga tgcaaatgtt tgggcttggt gcgatcagcc ttatcctggt atgtctgccc 420  
atttattgcc gctctctttt ctggaggagc gaaccggccg atgatttaca aaggcaggac 480  
aacagagttg taacgggttt gaagaaacaa agaaggaagc gaaagaggaa gtctgaaatg 540  
ttacagaaag cagcaagagg acgtgaggaa catggtgacg agctcgagca ccaccaccac 600  
caccactga 609

<210> 153  
<211> 201  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Polypeptide

<400> 153

Met Arg Val Ser Lys Pro Phe Gly Met Leu Met Leu Ser Ile Trp Ile  
1 5 10 15

Leu Leu Phe Val Cys Tyr Tyr Leu Ser Tyr Tyr Leu Cys Ser Gly Ser  
20 25 30

Ser Tyr Phe Val Leu Ala Asn Gly His Ile Leu Pro Asn Ser Glu Asn  
35 40 45

Ala His Gly Gln Ser Leu Glu Glu Asp Ser Ala Leu Glu Ala Leu Leu

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50	55	60
Asn Phe Phe Phe Pro Thr Thr Cys Asn Leu Arg Glu Asn Gln Val Ala		
65	70	75 80
Lys Pro Cys Asn Glu Leu Gln Asp Leu Ser Glu Ser Glu Cys Leu Arg		
	85	90 95
His Lys Cys Cys Phe Ser Ser Ser Gly Thr Thr Ser Phe Lys Cys Phe		
	100	105 110
Ala Pro Phe Arg Asp Val Pro Lys Gln Met Met Gln Met Phe Gly Leu		
	115	120 125
Gly Ala Ile Ser Leu Ile Leu Val Cys Leu Pro Ile Tyr Cys Arg Ser		
	130	135 140
Leu Phe Trp Arg Ser Glu Pro Ala Asp Asp Leu Gln Arg Gln Asp Asn		
	145	150 155 160
Arg Val Val Thr Gly Leu Lys Lys Gln Arg Arg Lys Arg Lys Arg Lys		
	165	170 175
Ser Glu Met Leu Gln Lys Ala Ala Arg Gly Arg Glu Glu His Gly Asp		
	180	185 190
Glu Leu Glu His His His His His His		
	195	200

&lt;210&gt; 154

&lt;211&gt; 405

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 154

catatgcggg tcagcaaacc ctttgggatg ctcatgctct ccatttggat cctgctgttc 60

gtgtgctact acctgtccta ctacctgtgc tccgggtcct catattttgt gcttgcaaat 120

ggacatatcc tgcccaacag tgaaaatgct catggccaat ctctggaaga agattccgca 180

ttggaagctt tgctgaattt tttctttcca acaacttgca atctgaggga aaatcagggtg 240

gcaaagcctt gtaatgagct gcaagatctt agtgagagtg aatgtttgag acacaaatgc 300

tgtttttcat catcggggac cacgagcttc aaatgttttg ctccatttag agatgtgcct 360

aaacagatga tgcaaagtgc cgagcaccac caccaccacc actga 405

&lt;210&gt; 155

&lt;211&gt; 133

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Polypeptide

-176-

&lt;400&gt; 155

Met Arg Val Ser Lys Pro Phe Gly Met Leu Met Leu Ser Ile Trp Ile  
 1 5 10 15  
 Leu Leu Phe Val Cys Tyr Tyr Leu Ser Tyr Tyr Leu Cys Ser Gly Ser  
 20 25 30  
 Ser Tyr Phe Val Leu Ala Asn Gly His Ile Leu Pro Asn Ser Glu Asn  
 35 40 45  
 Ala His Gly Gln Ser Leu Glu Glu Asp Ser Ala Leu Glu Ala Leu Leu  
 50 55 60  
 Asn Phe Phe Phe Pro Thr Thr Cys Asn Leu Arg Glu Asn Gln Val Ala  
 65 70 75 80  
 Lys Pro Cys Asn Glu Leu Gln Asp Leu Ser Glu Ser Glu Cys Leu Arg  
 85 90 95  
 His Lys Cys Cys Phe Ser Ser Ser Gly Thr Thr Ser Phe Lys Cys Phe  
 100 105 110  
 Ala Pro Phe Arg Asp Val Pro Lys Gln Met Met Gln Met Leu Glu His  
 115 120 125  
 His His His His His  
 130

&lt;210&gt; 156

&lt;211&gt; 38

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 156

cacacacaca tatgtcttca cataggagga aagcgaag

38

&lt;210&gt; 157

&lt;211&gt; 35

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 157

cacacactcg agctcgtcac catgttcctc acgtc

35

&lt;210&gt; 158

&lt;211&gt; 36

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 158

-177-

cacacacaca tatgcgggtc agcaaaccct ttggga 36

<210> 159  
<211> 35  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 159  
cacacactcg agctcgtcac catgttcctc acgtc 35

<210> 160  
<211> 36  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 160  
cacacacaca tatgcgggtc agcaaaccct ttggga 36

<210> 161  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 161  
cacacactcg agcatttgca tcattctgtt aggc 34

<210> 162  
<211> 936  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide

<400> 162  
gaattccttc tgggccacgg actgccggac cgttgggctg tgaggcagcg tctcagcgag 60  
gcggcaccgc gagccatgtc ttcacatagg aggaaagcga aggggaggaa taggagaagt 120  
cacctgcca tgcgtgtggc tcaactagag ctggcaactt atgagttggc ggcaactgag 180  
tcgaatcccg agagcagcca tcttggtac gagggcgcca tggctgacag gcctcagcca 240  
ggatggcggg aatctctaaa gatgcgggtc agcaaaccct ttgggatgct catgctctcc 300  
atctggatcc tgcgtgtcgt gtgctactac ctgtcctact acctgtgctc cgggtcctca 360  
tattttgtgc ttgcaaattg acatatcctg cccaacagtg aaaatgctca tggccaatct 420  
ctggaagaag attccgcatt ggaagctttg ctgaattttt tctttccaac aacttgcaat 480

-178-

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ctgagggaaa atcaggtggc aaagccttgt aatgagctgc aagatccttag tgagagttaa      540
tgtttgagac acaaatgctg tttttcatca tcggggacca cgagcttcaa atgttttgct      600
ccatttagag atgtgcctaa acagatgatg caaatgtttg ggcttggtgc gatcagcctt      660
atcctgggtat gtctgccccat ttattgccgc tctcttttct ggaggagcga accggccgat      720
gatttacaaa ggcaggacaa cagagttgta acgggtttga agaaacaaag aaggaagcga      780
aagaggaagt ctgaaatgtt acagaaagca gcaagaggac gtgaggaaca tggtgacgag      840
ctcgagtcta gagggccctt cgaaggaag cctatcccta accctctcct cggtctcgat      900
tctacgcgta ccggtcatca tcaccatcac cattga                                936

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<210> 163  
 <211> 311  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Polypeptide

<400> 163

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Glu Phe Leu Leu Gly His Gly Leu Pro Asp Arg Trp Ala Val Arg Gln
1           5           10           15
Arg Leu Ser Glu Ala Ala Pro Gly Ala Met Ser Ser His Arg Arg Lys
          20           25           30
Ala Lys Gly Arg Asn Arg Arg Ser His Arg Ala Met Arg Val Ala His
          35           40           45
Leu Glu Leu Ala Thr Tyr Glu Leu Ala Ala Thr Glu Ser Asn Pro Glu
          50           55           60
Ser Ser His Pro Gly Tyr Glu Ala Ala Met Ala Asp Arg Pro Gln Pro
65           70           75           80
Gly Trp Arg Glu Ser Leu Lys Met Arg Val Ser Lys Pro Phe Gly Met
          85           90           95
Leu Met Leu Ser Ile Trp Ile Leu Leu Phe Val Cys Tyr Tyr Leu Ser
          100          105          110
Tyr Tyr Leu Cys Ser Gly Ser Ser Tyr Phe Val Leu Ala Asn Gly His
          115          120          125
Ile Leu Pro Asn Ser Glu Asn Ala His Gly Gln Ser Leu Glu Glu Asp
          130          135          140
Ser Ala Leu Glu Ala Leu Leu Asn Phe Phe Phe Pro Thr Thr Cys Asn
145          150          155          160
Leu Arg Glu Asn Gln Val Ala Lys Pro Cys Asn Glu Leu Gln Asp Leu
          165          170          175
Ser Glu Ser Glu Cys Leu Arg His Lys Cys Cys Phe Ser Ser Ser Gly

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180					185					190						
Thr	Thr	Ser	Phe	Lys	Cys	Phe	Ala	Pro	Phe	Arg	Asp	Val	Pro	Lys	Gln	
195					200					205						
Met	Met	Gln	Met	Phe	Gly	Leu	Gly	Ala	Ile	Ser	Leu	Ile	Leu	Val	Cys	
210					215					220						
Leu	Pro	Ile	Tyr	Cys	Arg	Ser	Leu	Phe	Trp	Arg	Ser	Glu	Pro	Ala	Asp	
225					230					235					240	
Asp	Leu	Gln	Arg	Gln	Asp	Asn	Arg	Val	Val	Thr	Gly	Leu	Lys	Lys	Gln	
245					250					255						
Arg	Arg	Lys	Arg	Lys	Arg	Lys	Ser	Glu	Met	Leu	Gln	Lys	Ala	Ala	Arg	
260					265					270						
Gly	Arg	Glu	Glu	His	Gly	Asp	Glu	Leu	Glu	Ser	Arg	Gly	Pro	Phe	Glu	
275					280					285						
Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	
290					295					300						
Gly	His	His	His	His	His	His										
305					310											

&lt;210&gt; 164

&lt;211&gt; 67

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 164

gggaattcat gtcttcacat aggaggaaag cgcacacact cgagctcgtc accatgttcc 60

tcacgtc 67

&lt;210&gt; 165

&lt;211&gt; 73

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

&lt;400&gt; 165

cacacacaca tatgtcttca cataggagga aagcgaagca cacactcgag ctcgtcacca 60

tggtcctcac gtc 73

&lt;210&gt; 166

&lt;211&gt; 74

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide

-180-

<400> 166  
cacacacaca tatgcggggtc agcaaaccct ttgggacaca cacacatatg tcttcacata 60

ggaggaaagc gaag 74

<210> 167

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 167

tactcccctg ccctcaacaa gctcaggcgg ctcataggg 39